

1999

## Empirical foundations: the core competencies of registered nurse graduates

Bennie Lee Davis Marshall  
*College of William & Mary - School of Education*

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**EMPIRICAL FOUNDATIONS: THE CORE COMPETENCIES OF  
REGISTERED NURSE GRADUATES**

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**A Dissertation**

**Presented to**

**The Faculty of the School of Education  
The College of William and Mary in Virginia**

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**In Partial Fulfillment**

**Of the Requirements for the Degree**

**Doctor of Education**

---

**by**

**Bennie L. Davis Marshall**

**April 1999**

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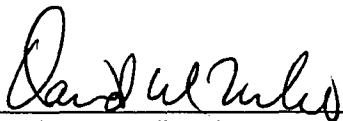
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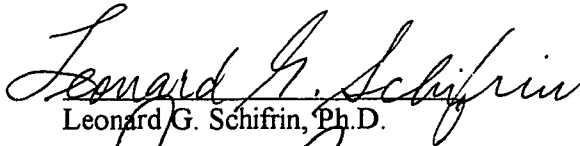
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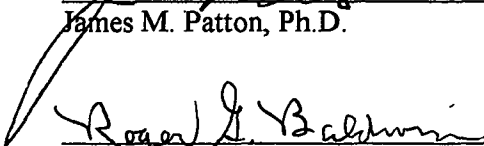
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## DEDICATION

This dissertation is dedicated to the memory of my husband, John Lewis Marshall, and my sister, Marion Davis. Additionally, it is dedicated to my mother, Ernestine M. Davis, who taught me that all things are possible if you believe in God, keep the Faith and work hard to achieve your goals.

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## ACKNOWLEDGMENTS

I have much to be thankful for and many to whom I am thankful. First and foremost, I thank God, for His will was done. Through life, it has been my desire “to make a difference.” This “journey,” accompanied by many major life events, however, has taught me that “Faith Makes The Difference.”

I am forever thankful for the many families of which I am a part. The Mt. Gilead Baptist Church Family believed in me and “claimed my victory” long before I did. The Sentara Health System Family provided tuition assistance, time away from my job, and a cheering squad to keep me pushing on. I am especially grateful for the Education and Research Staff and my secretary, Eva Sumner. My friends and neighbors of Eva Gardens, Crestwood and the Great Bridge areas of Chesapeake, Virginia served as my research team, preparing survey packets, reviewing numerous drafts of my work, providing child care, helping with household chores and most importantly accepting “me” as the student. I am deeply indebted to Margaret and Garrie Pettiford, Edna Snider, David Patterson, Vickie Greene and Dr. Mic Fedorko.

I had the best dissertation committee any doctoral student could want. I am especially thankful to my chair, Dr. David Leslie. He was a very sensitive and helpful chair. Professor Schiffrin was so committed to helping me to succeed that he worked “with me” and “for me” through a full year after his retirement. Dr. Baldwin, my advisor, and Dr. Patton were there for me through my entire course of study.

I am most grateful to the nursing community of Virginia for their participation in the study as well as their financial and emotional support. The Virginia Nurses’

Association, Virginia Organization of Nurse Executives; Epsilon Chi Chapter, Sigma Theta Tau International Honor Society for Nurses; and Omega Chapter, Chi Eta Phi Sorority, Inc. provided dissertation research support. Dr. Susan Jones, my friend, served as a nurse consultant for the study. She helped to build many bridges for me. Other friends and nurse colleagues who kept me focused on “the prize” were Dr. Susan Kaplan, Lucretia Melton, Nancy Jallo and Valeria Mitchell.

It was my friend, Ronald Haynes’ words of wisdom, “No test, No testimony,” that helped me to appreciate the struggles and use them as opportunities. His love and understanding added “soul balance” to a rocky journey.

Special thanks to my sisters Joyce Davis and Vera Edelin and my brother, William Davis. Thanks to my stepmother, Marie Dailey, who called every day to lift my spirits. Thanks to Cameron Dailey, my computer “Xpert and shopper.” My mother, Ernestine Davis, was always there for me. It is because of her love and prayers that I can celebrate.

My sons, John and Jeffrey, felt the most pain of my journey and made the greatest sacrifices. They took care of themselves and “survived” by “any means necessary.” I believe that they learned from my experiences and theirs that success is possible if you believe in God, keep the Faith and work hard to reach your goals.

There are far too many families and friends to identify by name, for “it takes a village” to earn a doctorate. For those named and unnamed, I thank each and everyone of you with all my heart and soul. May God continue to bless you as He has so wondrously blessed me.

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## Abstract

### EMPIRICAL FOUNDATIONS: THE CORE COMPETENCIES OF REGISTERED NURSE GRADUATES

Marshall, Bennie L. Davis, Ed.D. The College of William and Mary in Virginia, 1999. 208 pp.  
Chairperson: Professor David Leslie

Rising health care costs, introduction of new technologies, changing societal demographics and changes in reimbursement policies and practices are some of the forces creating an urgent need for a more efficient and effective health care delivery system. With the growth of managed care and the delivery of health care increasingly in community-based settings, the roles and responsibilities of health care personnel, especially nurses are also changing.

The purpose of this descriptive study was to identify the knowledge, skills, and abilities graduates of basic nursing education programs need, upon entry to practice, to function across work settings. Nursing staff, nurse executives and nursing faculty within the Commonwealth of Virginia were surveyed. Their perceptions of required competencies were compared and contrasted.

Although faculty rated Critical Thinking/Problem Solving and Psychosocial Skills significantly more important than did nursing staff and nurse executives, there was general consensus among the three groups regarding the core competencies for new graduates. When comparing acute care, long term care and community-based health care settings, there were no statistically significant differences in the core competencies identified by nurses from these settings. Five competency constructs, representing 19 competencies, were identified as essential for new graduates. Also, respondents identified six additional competencies. Further study is needed to empirically confirm the identified competencies. It is anticipated that these research findings will be used by nursing faculty for curricula design and revision. In addition, staff

development educators and continuing education providers may also use the findings for design of orientation and career development programs.

**EMPIRICAL FOUNDATIONS: THE CORE COMPETENCIES OF  
REGISTERED NURSE GRADUATES**

## Chapter 1

### The Problem in Context

#### Introduction

The health care delivery system in the United States is undergoing a significant period of change. These changes have been fueled by multiple factors, some of which include rising costs, increased technology, and changing demographics. As America's health care system rapidly evolves within an ever more tightly cost-constrained environment, we must reexamine the basic premises and practices of health care delivery. The appropriate roles and responsibilities of all health care professionals are among the chief issues requiring study. Providing high quality health care while continuing to hold the line on costs will increasingly challenge providers. One potential way of meeting this challenge is to restructure and redeploy the health care workforce more efficiently, with skills and training matched appropriately to needs.

As the hospitals and other health care delivery sites have been challenged to operate more efficiently and as patterns of care delivery have shifted from hospital to non-hospital settings, the roles and responsibilities of health care providers have been changing. Health professions education programs have been criticized for not responding quickly enough to these pressures to place more emphasis on preparation of practitioners for community-based practice.

Of particular significance, there is a perceived gap in the preparation of nursing graduates for practice in the emerging health care delivery system (Eubanks, 1992; VHA,

1992; Joyce-Nagata, Reeb & Burch, 1989; Chalmers, Bramadat & Andrusyszyn, 1998). Historically, nurses have been prepared to function in the acute care hospitals. Practice in the community, particularly the home, was contingent upon a defined number of years of prior hospital experience. As the paradigm for the delivery of care shifts from hospitals to non-hospital settings, acquiring prior hospital experience will not be possible for most nurses. Although nurses from a variety of clinical areas have identified site specific competencies, such as home care and ambulatory care, basic nursing education programs must be responsive to the broader marketplace for their graduates. Nursing faculty must prepare students for the “role of registered nurse.” For the emerging health care delivery system, nursing graduates must possess a set of core competencies that will allow them flexibility in practice settings and roles. Identification and validation of the knowledge, skills and abilities required for entry level nursing positions will assist nursing faculty to design curricula that is more socially responsive and produce appropriately prepared graduates (Halstead, Rains, Boland & May, 1996).

#### Purpose of the Investigation

The purpose of the investigation was to describe, from the perspectives of nurses— staff, executives and faculty— the core competencies nursing students should possess upon graduation from basic nursing education programs. Nurses must be able to function across practice settings and in multiple roles in the evolving health care delivery system. These expected educational outcomes will guide nursing faculty in the process of curricular revision. Additionally, staff development educators may use the information in the design of orientation and career development programs.

### Basic Assumptions

1. Nursing graduates who possess an identified core set of competencies and utilize “reflective practice”-- apply knowledge learned in one situation to another-- will function effectively across settings and in multiple roles upon entry to practice.
2. Identification of expected student outcomes will aid faculty in evaluating and improving the curricula of nursing programs.
3. An outcomes-focused curricular design keeps programs responsive to changing needs in society, within higher education and in the profession.
4. The knowledge, skills and abilities required in community-based settings will be relatively consistent across practice areas.
5. Nurses staff, nursing faculty and nurse executives are the appropriate persons to identify expected core competencies for new graduates.

### Limitations

The instrument is a self-report tool in which the responses are structured.

### Delimitations

The sample was drawn from nurses--staff, executives and faculty--employed within the Commonwealth of Virginia. Generalizability of findings is limited to that population.

### Definition of Terms

The sample consists of three categories of nurses-- nursing staff, nurse executives and nursing faculty. For the purpose of clarity, *nursing staff* was used to refer to registered nurses in non-management positions who are likely to provide direct patient

care--including physical and psychological care and patient/family teaching. Roles included in this definition of “nursing staff,” though not exclusively, are staff nurses, home health nurses, infection control nurses, quality improvement specialists, community health nurses, case managers, clinical nurse specialists, and unit based educators. *Nurse executive* was used to refer to nurse managers, head nurses, nursing supervisors, nursing administrators, and nurse executives -- persons who oversee the nursing workforce, are in middle and upper level management positions and participate in hiring and staffing decisions. *Nursing faculty* was used to refer to nurses who hold full or part-time positions primarily in schools of nursing and are responsible for classroom instruction and/or clinical supervision of students enrolled in basic nursing education programs.

*Basic Nursing Education Program* was used to refer to one of the three generally recognized entry-level nursing programs leading to licensure as a registered nurse: associate degree (AD), diploma or baccalaureate degree (BS). *Associate Degree Nursing Program* is an entry level program generally requiring two years of study in a community college or university. *Diploma Nursing Program* is an entry level program that requires two to three years of study. The program is usually sponsored by a hospital or health care system. *Baccalaureate Degree Nursing Program* is an entry level program generally requiring four years of study in a college or university, most often an academic health center. Individuals licensed as registered nurses having earned an associate degree or diploma may also pursue a baccalaureate degree; however, these individuals would be considered experienced nurses, not entry level practitioners.

Understanding the levels of care according to the setting in which care is provided



is very important from an economic perspective. In this study, references are made to acute care, long term care and community-based care. *Acute care* was used to refer to care provided in hospitals and other health care facilities where the average length of patient stay is less than 30 days. *Long-term care* refers to care provided for 30 or more days to a majority of all admissions to a nursing home type unit or extended care facility. Skilled nursing, intermediate care, personal care and shelter and residential care are provided in long term care facilities. *Community-based care (settings)* refers to non-institutionalized care provided to patients in their homes, workplaces, schools, and communities. Examples of community-based care include home health care, public health, community health, and ambulatory care (e.g., clinics and doctors' offices).

The focus of this study was on the *competencies* required of new registered nurse (RN) graduates upon entry to practice. *Competence* refers to the level of proficiency that professional program faculty expect a graduate to demonstrate. It is the ability to meet or surpass prevailing standards of adequacy for a particular activity and includes requisite knowledge, skills, and abilities. Of most importance are the *core competencies*, which, for the purpose of this study, are defined as the specific knowledge, skills, abilities and attitudes, not merely tasks, that a new graduate can be expected to demonstrate, and are needed, at the time of graduation in order to practice across work settings in multiple entry level positions. These core competencies are postulated to be the *educational outcomes* (evidence that course or program objectives have been met) of basic nursing education programs.

To understand the impact of health care reform as an external force influencing

the education and practice of nurses, the following terms are defined as they are used in this study.

***Access*** refers to the potential and/or actual entry of a given population, group or individual as a patient(s) to the health care delivery system.

***Cost*** of a health service is the value of the productive resources ( i.e., personnel, materials) used in production of the service.

***Differentiation of Practice*** refers to the assignment of responsibilities and provision of compensation commensurate with educational preparation, experience and competencies.

***Direct Costs*** are changes in resource use attributable to the intervention being studied; includes both medical and nonmedical resources.

***Effectiveness*** refers to the extent to which the output of a product, service, or program meets its objectives as assessed under normal operating conditions.

***Expenditures*** refer to the amount actually paid in exchange for services.

***Health benefits*** refer to improvement in health status.

***Information asymmetry*** is the state in which one group (usually providers) has more information regarding health status, clinical procedures or outcomes than another group (usually patients or insurers), which can affect the costs of care, through both price and consumption (utilization).

***Out of pocket expenses (prices)*** refer to the price paid by consumers for health care services that are not subsequently recovered from insurers or the government.

***Productive efficiency*** refers to the provision of needed health care services at the lowest cost.

***Quality of care*** is the degree to which the process of medical care increases the probability of outcomes desired by patients and reduces the probability of undesired outcomes given the state of medical knowledge (U.S. Congress, 1988 as cited in Jacobs, 1997).

***Socialization*** refers to a largely subconscious process by which an individual acquires the attributes-- norms, values, knowledge, skills and behaviors--shared by members of a particular profession to which a sense of identify has developed (AACN, 1987; AACN, 1996).

***Staffing mix*** refers to the proportion of various healthcare providers involved in the delivery of care, e.g., the number of registered nurses (RNs), licensed practical nurses (LPNs), and unlicensed assistive persons (UAPs) on a health care team.

***Unlicensed assistive personnel*** are nursing assistants, care partners, and other ancillary nursing personnel with limited education, trained to provide basic patient care under the direct supervision of the registered nurse.

***Utilization*** is the extent to which members of a covered group use a program or obtain a particular service, or category of procedures over a given period of time. It is usually expressed as the number of services used per year or the number of persons eligible for the services.

### **Significance of the Problem**

The need to control rising health care costs and the growth of managed care have intensified the need for health care agencies to operate more efficiently. Hospitals, representing the most costly delivery site, and nurses, the single largest group of health

care providers, have been affected most. For the past two decades, as the financing and delivery of health care have changed, nursing has struggled to identify its unique contribution, to differentiate practice according to educational preparation and to document differences in performance. Nursing, as other health professional schools, is buffeted by many of the same factors that affect higher education, in addition to those factors unique to professional education (Sullivan, 1997). The ability of higher education and nursing education to respond appropriately to societal issues is critical to the education of the student and to programmatic survival. The nursing community must be responsive to the external, intraorganizational and internal forces affecting the education and practice of nurses.

The *external* influences on nursing curricula, particularly health care reform and the changing marketplace for nurses, have exerted significant force to create a gap between expected and actual competencies of entry level nurses. Survival of nursing in the evolving health care delivery system is dependent upon nursing faculty being responsive to these external influences. Nursing faculty have been challenged to evaluate the current curricula and revise them as necessary. At the same time, there are intraorganizational influences, some of which serve as driving forces and others as restraining forces for needed curricular change. Faculty accountability for programmatic success is a driving force. In contrast, fiscal constraints within higher education slow curricular change processes.

Changes in financing and delivery of health care services are necessitating changes in roles and responsibilities of health care providers, particularly nurses [Pew

Health Professions Commission (Pew), 1995b; Pew, 1993b]. The shift in practice settings from hospitals to community-based sites has placed a strain on community health nursing agencies, creating a need for nurses prepared to practice in those settings [Oesterle & O'Callaghan, 1996; National League for Nursing (NLN), 1997; Tagliareni & Marckx, 1997]. Concurrently, the employment of nurses in hospitals has decreased and the demand for nurses able to care for more acutely ill patients in all settings has increased. Additionally, fewer nurses are able to secure positions in hospitals and receive 1 - 2 years of hospital experience prior to seeking employment in community-based settings.

The internal forces--forces within the nursing profession--that affect the education and practice of nurses include the program mission and faculty values, beliefs and competence. Schools of nursing have a mission of preparing graduates for practice in contemporary society. This is consistent with a focus on a demand driven and outcomes-oriented education (Stark, 1990). Faculty practice, on the other hand, is not usually rewarded; therefore, except in a few unique settings, nursing faculty may not be clinically competent to function in the emerging health care delivery system. The autonomous nature of the health professions serves as a barrier to effective collaboration between nursing education and service. Thus nursing faculty and nurses in health care agencies differ in their perceptions of expected competencies of nurses upon entry to practice. This perceived gap contributes to the ongoing debate over educational preparation for entry to practice. The unresolved issue remains, "What should be the educational preparation of nurses for entry into professional nursing practice?"

Although a baccalaureate degree is recommended as entry level nursing preparation, research does not indicate significant differences in performance related to educational preparation [American Nurses Association (ANA), 1996]. All first time graduates of basic nursing programs take the same professional examination to demonstrate minimal competencies. Most community-based agencies will hire nurses with all levels of educational preparation; however, preference is frequently given to those with prior nursing experience. Usually these agencies, however, do not articulate clearly the competencies that are expected to have been gained via the required experience.

Registered nurses are educated via three different principal routes for initial licensure. The professional community, primarily, the accrediting agency (NLN), has established expected competencies for each of these programs. These competencies, while somewhat similar, prescribe different practice roles— technical nurse versus professional nurse. Graduates of all three basic educational programs write the same licensing examination (NCLEX-RN) leading to licensure as an RN. The exam assures the employer that licensees meet minimum requirements to provide competent safe care as an “RN.” So although “a registered nurse may not be a registered nurse,” the professional community has not provided sufficient evidence to the contrary and employers, particularly hospitals in Virginia, have not differentiated among RNs based upon education, experience and competencies. All RNs hired for entry-level positions are expected to function similarly in hospitals and in most non-hospital settings. Thus, there is general confusion regarding the responsibilities of the RN.

Nursing is faced with several unanswered questions. First, “What should be the educational preparation— AD, diploma or BS— for entry to professional nursing?” Second, “Is there a difference in the observed competencies of AD, diploma and BS graduates upon entry to practice?” Third, “What are the core competencies required of RNs upon entry to practice, to function across work settings and in multiple entry level positions?” This study seeks to answer only question number three.

Health care is changing rapidly and expected to continue to change. In order to survive as a profession nursing must change. As health care moves from structured to less structured and even unstructured environments, the marketplace has voiced a demand for certain entry level competencies. Economic pressures are forcing consideration of the entry level issue— as employers seek the least costly employee who is competent to perform the job. The products of nursing programs must be perceived as cost-effective alternatives for meeting comprehensive health care needs in diverse settings. Failure to be socially responsible will adversely affect nursing as a profession.

To be socially accountable, faculty need to prepare appropriately competent graduates for available positions. Therefore, nurses should not be prepared for a specific setting. They should be prepared for a “role” within a dynamic health care environment and with the ability to function in multiple settings (NLN, 1997). As described by Hunt (1998), “community-based nursing, describes a philosophy of care applicable to nurses in all settings, reflecting how nursing care is provided-- not where” (p. 45). Although the traditional values and ways we think about each area of practice differ, nursing in each does not require widely different knowledge, skills, and abilities. Determination of core

competencies will aid nursing faculty in assessing, planning, implementing and evaluating the educational processes for nurses.

### Summary

This research study aimed to describe the core competencies expected of graduates of basic nursing education programs as perceived by nursing staff, nurse executives, and nursing faculty. The changes in the financing and delivery of health care services are creating a demand for changes in the roles and responsibilities of health care providers, especially nurses. Historically, nurses have been prepared to function in acute care facilities, primarily hospitals. As the delivery of care moves from hospitals to community-based settings, the nursing leadership needs to give consideration to the roles of nurses in entry level positions across health care settings, determine what core competencies the graduate must possess in order to function effectively, and design appropriate curricula—consistent with patient needs, practice settings and expected roles and responsibilities. For nurses, there is a long standing gap between the expectations of nursing faculty and nursing service representatives (nursing staff and nurse executives). To foster current and future social relevancy of the curricula, nursing faculty must consider the interaction of the various external, intraorganizational and internal influences on the nursing curricula and required educational outcomes.

The information generated by this study can serve as baseline data for faculty consideration when revising curricula, to improve relevancy to the needs of the health care delivery system now and in the future. Additionally, the findings will aid staff development educators and managers in the design of orientation and continuing



education programs. Furthermore, initiation of an ongoing dialogue among nursing staff, nurse executives and nursing faculty will help promote consensus regarding competency expectations of new graduates.

## Chapter 2

### Review of Literature

#### Introduction

The literature review supporting this research study is organized around three major issues. First, an explanation of the changes in the financing and delivery of health care services (health care reform), including related paradigm shifts, is presented. This discussion is followed by an exploration of the impact of these changes on the education and practice of health professionals, especially nurses. Finally, specific, though limited, research related to the education and practice of nurses in the emerging health care delivery system is discussed.

#### Health Care Reform

America is in the midst of a major transition in the provision of and payment for health care services. The concerns that compelled this era of change are old ones. As early as 1932, providing satisfactory medical service to all, at an affordable cost was posed as an important need for this country. Today these concerns are as great as, or greater than ever and, to help meet them, the health care system is experiencing a revolutionary transition. The goal is to alter the system from one that is costly and inefficient to one that is cost-contained and efficient. The instrument of change is called “managed care,” in which large insurers enter into health service markets and induce

competition, often intense, among providers for the patients these insurers represent. Thus managed care has engendered “market driven” health care, with the goals being those of markets in general: efficiently producing those goods and services that best meet the needs of patients/consumers, while charging prices that reflect this productive efficiency.

The overriding issue in health care has been “cost,” a term with many meanings. Most accurately used, “costs” mean “costs of production,” derived from the outlays for resources incurred by health service providers in producing a particular medical service or a cluster of services for an episode of illness. On the other hand, the prices charged by providers become “costs” to patients or insurers, and thus “costs” have come also to mean “costs of consumption.” Further, costs of consumption of health services go beyond price tags, to include the quantities consumed. Hence, the “costs of health care” for an individual or family also measure total expenditures for health care over a period of time, usually a year. For the nation as a whole, the costs of health care may be expressed as an average expenditure per person or family or as an aggregated “National Health Expenditure,” representing either the total dollars expended by the nation or the fraction of all production or consumption (Gross Domestic Product, or “GDP”) accounted for by health care, also usually for a year.

Compared to other industrialized countries, usually identified as members of the Organization for Economic Cooperation and Development (OECD), the American health care system is very costly, its quality inconsistent and its benefits unequally distributed. The rise in health care expenditures in the United States (U.S.) has far exceeded that of all other OECD countries by a wide margin, whether measured in per capita terms (adjusted

for rates of inflation that vary in different countries) or, even more clearly, as a percent of GDP (See Table 1) (OECD, 1992, p. 18). As illustrated in Table 2, U. S. national health expenditures as a percent of GDP rose steadily from 5.1% in 1960 to 13.7% in 1994 and in a like manner rose from \$141 per capita in 1960 to \$3,510 per capita in 1994 (National Center for Health Statistics, 1996, p. 239). Additionally, health as a percent of total federal government expenditures rose from 3.3% in 1960, approximately \$89.6 billion, to 19.4% in 1994, approximately \$303.6 billion (National Center for Health Statistics, 1994).

“Increase in health care expenditures reflect the relative price of health care—the amount by which the prices of health care services have risen in excess of the prices of other goods—and increases in the quantity of services delivered” (OECD, 1992, p. 12). The high U.S. expenditures compared with other countries appear to reflect increases in prices to a larger extent than increases in volumes (OECD, 1992). Using purchasing-power-parity (PPP) price indices that allow cross country comparisons of prices and quantities, the price of health care in the U. S. is the highest in the OECD— 57% above average for a volume of health services approximately 30% above the average (OECD, 1992). With insurance paying most of the costs, prices have been pushed steadily higher by providers. Additionally, since insured patients’ “out of pocket payments,” limited to deductibles and co-payments, for consumption of health care have been below the actual cost, there have been incentives for patients to over-consume health care. As a result, both price and utilization levels of health care services have been major factors contributing to the increase in health care expenditures.

Table 1

**Total Health Expenditures As A Percent of Gross Domestic Product and**  
**Per Capita Health Expenditures in Dollars: Selected Countries and Years, 1960 - 1994**

<i>Country</i>	<i>1960</i>	<i>1965</i>	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1994</i>
<b><i>Health Expenditures as a Percent of Gross Domestic Product</i></b>								
<b><i>Canada</i></b>	5.5	6.0	7.1	7.2	7.4	8.5	9.4	9.8
<b><i>France</i></b>	4.2	5.2	5.8	7.0	7.6	8.5	8.9	9.7
<b><i>Germany</i></b>	4.8	5.1	5.9	8.1	8.4	8.7	8.3	9.5
<b><i>United Kingdom</i></b>	3.9	4.1	4.5	5.5	5.6	5.9	6.0	6.9
<b><i>United States</i></b>	5.1	5.7	7.1	8.0	8.9	10.2	12.1	13.5
<b><i>Per Capita Health Expenditures<sup>a</sup></i></b>								
<b><i>Canada</i></b>	105	151	255	434	739	1,215	1,716	2,010
<b><i>France</i></b>	72	120	206	393	711	1,090	1,538	1,866
<b><i>Germany</i></b>	93	129	216	462	819	1,175	1,520	1,869
<b><i>United Kingdom</i></b>	76	99	147	277	452	671	955	1,211
<b><i>United States</i></b>	141	202	341	582	1,052	1,733	2,683	3,465

Note. Table modified from Table 117; p. 250 Health, United States, 1996 - 1997.

National Center for Health Statistics, Washington, DC, 1997. <sup>a</sup>Per capita health expenditures for each country have been adjusted to U.S. dollars using gross domestic product purchasing power parities for each year.

Table 2

Gross Domestic Product, National Health Expenditures,and Average Annual Percent Change: United States, Selected Years, 1960 - 1995.

<i>Year</i>	<i>National Health Expenditures</i>				<i>Federal Government Expenditures</i>		
	Gross Domestic Product in Billions	Amount in Billions	Percent of Gross Domestic Product	Amount Per Capita	Total in Billions	Health in Billions	Health as a Percent of Total
<b>1960</b>	\$526.6	\$26.9	5.1	\$141	\$89.6	\$2.9	<b>3.3</b>
<b>1965</b>	719.1	41.1	5.7	202	122.5	4.8	<b>3.9</b>
<b>1970</b>	1,035.6	73.2	7.1	341	209.1	17.8	<b>8.5</b>
<b>1975</b>	1,630.6	130.7	8.0	582	371.3	36.4	<b>9.8</b>
<b>1980</b>	2,784.3	247.2	8.9	1,052	622.5	72.0	<b>11.6</b>
<b>1985</b>	4,180.7	428.2	10.2	1,733	974.2	123.3	<b>12.7</b>
<b>1990</b>	5,743.8	697.5	12.1	2,683	1,289.5	195.8	<b>15.2</b>
<b>1995</b>	7,253.8	988.5	13.6	3,621	1,640.1	328.4	<b>20.0</b>

Note. Modification of Table 116. Cited in Health, United States 1996 - 1997, p. 249,

National Center for Health Statistics, Washington, DC, 1997.

Conversely, general inflation contributes only a portion to the rate of increase in health care costs. Higher price tags due to inflation specific to the health care industry is one of several other factors. Important factors increasing the utilization of health care include higher consumption levels associated with population growth, the development of new medical technology and increased “intensity” of services provided to all patients (Thorpe & Kovner, 1995).

The paradoxical use of resources for health care is exemplified by examining trends in the consumer price index (CPI). The CPI is a measure of the average change in prices paid by urban consumers for a fixed market-basket of goods and services (National Center for Health Statistics, 1997). The medical component of the CPI shows trends in medical care prices based on specific indicators of hospital, medical, dental and drug prices. Price changes are measured from a designated reference date, (in this case 1982 to 1984), to which a relative value of 100 is assigned. The CPI for all items increased between 1980 - 1995 by 50% (See Table 3). Over the same period, the CPI for all medical care increased by 120%, with physician services demonstrating a 108% increase and hospital and related services a 157% increase. Additionally, from 1990 - 1995, the inflation rate of 6.3% for the medical care component of the CPI was more than double the overall inflation rate of 3.1% (National Center for Health Statistics, 1997).

While rising health care costs may affect all countries, control of health expenditures in the United States is more difficult than in countries that have a nationwide coordinated health policy. Because of the fragmentation of the U.S. health care delivery system, effective control of health expenditures in one segment of that

Table 3

Consumer Price Index For All Items and Medical Care Components:United States, Selected Years, 1960 - 1995

<i>Item and Medical Care Component</i>	<i>1960</i>	<i>1965</i>	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>
	<i>Consumer Price Index</i>							
<i>CPI, All items</i>	29.6	31.5	38.8	53.8	82.4	107.6	130.7	<b>152.4</b>
<i>Less Medical Care</i>	30.2	32.0	39.2	54.3	82.8	107.2	128.8	<b>148.6</b>
<i>CPI, all services</i>	24.1	26.6	35.0	48.0	77.9	109.9	139.2	<b>168.7</b>
<i>All Medical Care</i>	22.3	25.2	34.0	47.5	74.9	113.5	162.7	<b>220.5</b>
<i>Physicians' Services</i>	----	-----	37.0	48.1	76.5	113.5	160.8	<b>208.8</b>
<i>Hospital &amp; Related Services</i>	----	-----	-----	-----	<b>69.2</b>	<b>116.1</b>	<b>178.0</b>	<b>257.8</b>

Note. 1982 - 1984=100; Data are based on reporting by samples of providers and other retail outlets. (U.S. Department of Labor, Bureau of Labor Statistics. Consumer Price Index. Various releases.) Cited in: Health, United States, 1996 - 1997, p. 252. National Center for Health Statistics, Washington, DC, 1997.



market or for one group of beneficiaries may be offset by increases in costs in another, less controlled segment of the market (Arnould, Rich & White, 1993). Market-oriented reforms aim to decrease health spending and/or its rate of growth by offering incentives to choose more economical care providers and delivery systems. Efforts to control rising health care costs, therefore, have focused in large part on hospitals-- the primary and most expensive care delivery site. Strategies have included control over hospital admitting practices and resources used by hospitals, as well as limits on hospital payment and the development of lower cost alternative settings for the delivery of care (Thorpe, 1995). Lacking a plan for comprehensive health care reform, competitive approaches have been implemented on a piecemeal, experimental basis. Cost containment strategies within the public sector have usually preceded those in the private sector. The growth of "managed care," is one of the major cost containment strategies and seemingly has had the greatest impact on the financing and delivery of health services.

The paradox of the United States health care system is that despite the high level of total spending, there are many uninsured and underinsured. As many as 39 million people in the United States have little or no access to basic medical service because they lack some form of health insurance and another 70 million have limited insurance. Additionally, the general health status of Americans, as measured by morbidity and mortality rates and other indexes, is not consistent with the magnitude of our health expenditures. For example, although health expenditures in the U.S. far exceed those of other OECD countries, the U. S. ranks 24<sup>th</sup> among nations in its infant mortality rate, and in life expectancy the United States ranks behind Sweden, Germany, Italy, France and

Canada (OECD, 1992).

As noted, the health status in the United States is not proportional to health expenditures; thus the health care reform goals also include decreased costs, improved quality of care and improved access to care. Until the late 1960s, in response to increases in costs of care, the primary focus of public policy efforts was on increasing patients' financial access to care. Because rising health care costs were not addressed directly, increased financial access severely exacerbated these costs, necessitating changes in reimbursement mechanisms (Arnould, et al., 1993). As described below, Medicare and Medicaid were two mechanisms that sharply improved access for major groups outside the existing system of private, employment based insurance, namely, the elderly, poor and disabled. Additionally, monitoring systems were established to ensure the quality of care provided.

#### Medicare and the Retrospective Payment System

Medicare was enacted in July 1965 after years of debate in Congress over the need for national health insurance for persons 65 years of age and over. The goal of Medicare was to provide financial access for health care services to this vulnerable population. Persons 65 years and older typically have multiple chronic diseases, which result in per capita health care expenses about four times greater than those for younger persons (Health Care Finance Review, 1996). Usually, they have limited purchasing power and are not eligible for employer-provided group coverage, the main type of private health insurance in the United States then, as now. In 1973, legislation extended coverage to persons entitled to disability benefits for 24 months or more, persons with end stage renal

disease requiring dialysis or kidney transplantation, and certain non-covered persons who elected to buy into the program.

From its inception in 1965 until late in 1982, Medicare, in a like manner to other public and private insurers, paid hospitals for inpatient services rendered to its beneficiaries on the principle of “reasonable and necessary costs,” so called “cost-based reimbursement.” Under cost-based reimbursement, also known as “fee-for service” (FFS), hospitals were paid whatever they legitimately claimed as costs for a particular service, resulting in great variability in payment rates across hospitals. More importantly, FFS reimbursement methodology increased costs of health care as there were no incentives to promote efficiency, to control prices, or especially to limit the quantities of care provided. Within a few years after implementation, Medicare Program costs (primarily inpatient hospital expenses and fees for physician services) had far exceeded projections and continued to accelerate. In fact, national health expenditures rose from approximately \$27 billion in 1970 to \$247.2 billion in 1980, with Medicare payments accounting for 9.1% (\$20.3 billion) of the increase and other public and private insurers accounting for most of the rest.

“The continued escalation of hospital costs, concern over projected deficits in the Medicare Trust Funds, and the inability of the hospital industry to control costs voluntarily, stimulated Congress to take action to control hospital expenditures” (Davis, Anderson, Rowland & Steinberg, 1990, p. 35). The first major action by Congress, aimed at controlling the rate of growth in Medicare hospital expenditures was the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). TEFRA limited the rate of increase in

hospital expenditures for Medicare beneficiaries to the rate of increase in the hospital “input” price index, that is prices paid by hospitals as purchasers plus an allowance of 1% for technology and services; added a case mix index to the Diagnosis Related Groups (DRG) system, limiting the level of hospital expenses per discharge; and recommended a prospective payment system for hospitals. In addition to significant budgetary savings, TEFRA introduced into the Medicare payment system rewards for efficient performance, a methodology for risk sharing. Hospitals were allowed to retain a portion of the savings if they functioned efficiently and they were penalized for inefficiency. The TEFRA system, however, was a “stop-gap” measure and as such was replaced by the Medicare Prospective Payment System in 1983.

#### DRGS and the Prospective Payment System

One of the most significant efforts to control costs was the 1983 Social Security amendment that mandated an end to cost-based reimbursement by Medicare and initiated a three year transition to a prospective payment system (PPS) for inpatient hospital services. The PPS is based on fixed per-case payment rates, determined by averaging the costs of producing services nationwide for patients in 468 diagnosis-related groups (DRGs).

DRGs are part of a patient classification system developed to reflect differences in predicted resource use among different kinds of hospital patients (U.S. Congress, Office of Technology Assessment, 1985). Hospital patients are classified according to their primary diagnoses, procedures performed, age, discharge status and complications and/or co-morbidities. “A major assumption of the DRG system is that patients within each

DRG are homogeneous with respect to their consumption of hospital resources” (Davis, et al., 1990, p. 36). The payment rate for each DRG is the product of two components: a base payment amount that applies to all DRGs and a relative weighting factor for the particular DRG. The base payment amount is adjusted for area differences in hospital wage levels compared to the national average hospital wage levels.

The goal of Medicare’s PPS is to reduce outlays for inpatient hospital care while maintaining an acceptable level of access and quality. The PPS serves as an incentive for hospitals to operate efficiently. Hospitals are challenged to reduce the cost of treating patients over the course of their stays, decrease the patients’ lengths of stay and provide the necessary care in the least expensive manner.

As was the case under the TEFRA System, if hospitals operate efficiently and are able to provide the needed care within the established prepaid allowance, they are allowed to retain part of the savings. In addition, the PPS was designed to eliminate unjustifiable differences in patient care and hospital pricing behavior by paying similar amounts for comparable conditions. Thus, PPS served to constrain the rate of increase in Medicare expenditures by giving providers an incentive to control costs and volumes of service. Further, as providers demonstrated efficiency, the DRG payment could be lowered, further slowing the rise in health expenditures. Concurrent with changes in reimbursement mechanisms was the establishment of systems to monitor both the financing and delivery of health care services.

As previously noted, the health care costs associated with the Medicare Program exceeded projections because of unanticipated increases in Medicare utilization rates, as

well as rising prices. Professional Standards Review Organizations (PSROs), monitoring systems, were established in 1972 to promote the effective and economical delivery of health care services to all Medicare, Medicaid, and maternal and child health patients. All health care institutions that received reimbursement from federal funds under the Medicare or Medicaid Programs had to submit to utilization review, a process whereby trained health care professionals evaluate the appropriateness, quality and medical necessity of services provided (Jacobs, 1997). The PSRO program, however, was soon deemed only marginally cost effective because of geographic variability in costs, lack of control over physician behavior and legislative and regulatory restrictions associated with utilization review.

Thus, in 1984, Professional Review Organizations (PROs) replaced PSROs. Each state was required to establish a PRO to oversee quality of health care services and monitor lengths of stay. The goals of the PROs were to assure provision of adequate care, decrease unnecessary surgeries, decrease the risk of mortality associated with specific procedures and conditions, reduce avoidable complications and decrease unnecessary hospital readmissions (Thorpe, 1995). PROs achieve these goals in several ways. They review the validity of diagnoses and the appropriateness of admissions, discharges, and transfers. Additionally, they evaluate the nature and management of outlier cases (Jacobs, 1997; Thorpe, 1995).

During the decade of the 1980s, much of the effort to control health care costs focused on hospital spending, resulting in a decrease in admissions and reduced length of patient stays (Langwell & Menke, 1993). Given the changes in hospital and physician

reimbursement policies and practices for Medicare beneficiaries, the growth of spending for hospital and physician services was decreased. Thus, the changes in reimbursement for health services to Medicare recipients stabilized the average annual rate of growth of per capita spending for hospital care in the nation (Langwell & Menke, 1993). The controls developed by the federal government for the Medicare system were quickly adopted by state Medicaid programs and private sector insurers, generating important ramifications for the entire health care financing and delivery systems.

### Medicaid

Medicaid, enacted in July 1965, is a joint federal-state entitlement program under which the states provide medical benefits to low-income individuals who meet specific criteria and income and asset requirements-- usually, those eligible for welfare or Supplemental Security Income (SSI). The federal government supports the Medicaid Program by matching state program spending, thereby encouraging states to provide comprehensive health care coverage to the poor.

Unlike the Medicare Program, Medicaid's allowances for health care providers and financial incentives for efficiency have varied considerably from one state to another. All states cover hospital and physician services; however, coverage of other services varies widely.

Medicaid, although a smaller part of the total picture, is the fastest growing component of federal health expenditures. From its enactment in 1965 to 1971, expenditures grew rapidly from \$1.6 billion to \$6.3 billion (Davis, et. al., 1990). The 1972 amendments to the Social Security Act expanded Medicaid coverage to the aged,

blind and disabled, leading to a decrease in the comprehensiveness of coverage for most beneficiaries. From 1971 - 1975, Medicaid spending increased at an annual rate of 25% (Arnould, et al., 1993), with rising prices and the intensity of services accounting for almost all of this increase. The Omnibus Budget Reconciliation Act of 1981 imposed a temporary reduction (between 3% and 4.5%) in the federal share of Medicaid spending in each state from 1982 - 1984. Before 1981, states had been required to pay hospitals using Medicare's "fee-for-service" principle of hospital payment. After the Omnibus Budget Reconciliation Act of 1981, states were able to experiment with alternatives to "fee-for-service" reimbursement. In 1984, federal program financing was restored; however, at the same time Medicaid eligibility was expanded to pregnant women, infants, and children, leading to a continued rise in Medicaid spending. With Medicare and Medicaid spending weakly controlled and utilization rates again accelerating, further changes in the financing and delivery of health care services to Medicare and Medicaid beneficiaries were needed. Managed care is that primary change agent.

### Managed Care

Managed care is a strategy to balance access to, cost of, and quality of health services. Incentives are offered to health care providers in order to ensure that only appropriate and necessary services are provided efficiently (Langwell & Menke, 1993). The rapid rise of managed care is perhaps the most publicly visible change that has occurred in the evolution of the U.S. health care system. In a managed care organization, the provider of health care services accepts responsibility for providing a specified "menu" of health care services to a defined population. Financial risk is inherent in



assuming that responsibility for a fixed, prepaid amount. Providers must determine how to provide cost-effective care in the most appropriate setting, at less than the prepaid allowance. If this is accomplished providers are allowed to retain the savings.

As managed care has evolved and grown, one important effect is that the provision of health care services has begun to shift from inpatient (more expensive) to outpatient and community-based settings. Outpatient services, such as pre-admission testing, outpatient surgery, and diagnostic tests and procedures have become commonplace. Increasingly, more care is being provided in patients' homes and extended care facilities. Additionally, the focus of care is moving from the more costly paradigm of "treatment and cure" to "wellness, health promotion and disease prevention," and hence a greater proportion of services are being provided more appropriately in community settings.

#### Impact of Changes in Financing and Delivery of Health Care

The previously described changes in the financing and delivery of health care, most particularly the emergence and growth of managed care, pose a significant threat to existing ways--demanding greater efficiency and effectiveness of the institutions and people providing health care services. While all parts of the health care delivery system are affected, hospitals and nurses are particularly challenged to adapt. More importantly, the adaptations that hospitals are making directly affect nurses and are likely to continue.

#### Need for More Efficient Operation of Hospitals

Hospital care, as previously described, long has been the largest component of total health care expenditures in the United States. In fact, there was a steady increase in

Table 4

Hospital Expenses and Personnel in Non-federal Short Stay Hospitals.Selected Years, 1971 - 1993.

Expenses for Inpatient Care					Personnel (FTE <sup>a</sup> )	
Year	Total Billions	Per Inpatient Day	Per Inpatient Stay	Employee cost as % of Total	# in Thousands	# per 100 Patients
1971	\$22.4	\$83	\$667	63.9	1,999	272
1980	77.0	244	1,844	56.4	2,879	334
1985	130.7	460	3,239	55.2	3,003	385
1990	203.9	682	4,930	53.6	3,423	417
1993	266.4	875	6,121	52.8	3,681	441

Note. <sup>a</sup>FTE= Full time equivalent; Source: 1999 Hospital Statistics, Health Forum,

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the expenses for inpatient care in the United States from 1971 - 1993 (see Table 4). The expenses per inpatient day have increased more than tenfold in the 22 years between 1971 and 1993, from \$83 to \$875 per patient day, adjusted for inflation (Langwell & Menke, 1993). As previously emphasized, external pressures such as reimbursement systems and managed care are challenging hospitals to operate even more efficiently. Because hospital care is very labor intensive, with labor costs representing almost 53% of hospitals' total costs, one of hospitals' responses to the need to operate more efficiently is to evaluate the numbers and types of health care professionals, their roles and responsibilities, as well as, the staffing mix-- in search of lower cost alternatives among health care personnel (Pew, 1993b; Booth, 1995). Thus, staffing patterns are being redesigned and reconfigured, increasingly moving towards interdisciplinary teams of caregivers with varying degrees of competencies. In an effort to control personnel costs, hospitals have substituted less skilled and thus less costly staff for registered nurses, increasing the number of personnel but decreasing personnel costs. In fact, the employee cost as a percent of total provider costs for rendering inpatient care has decreased from 63.9% to 53% despite an 5% increase in personnel per 100 patients (AHA, 1994).

#### Effects on All Health Professionals

The rapid and diverse changes in the financing and delivery of health services have had and are likely to continue to have effects on the roles, responsibilities and educational preparation of health care professionals. Health care personnel will experience the need for increased accountability, to more interest groups, for a wider range of outcomes. According to the Pew Health Professions Commission, "the

competencies, flexibility, commitment and morale of the health professional workforce will become the most important factors contributing to the success or failure of the evolving health care delivery system” (Pew, 1995a, p. 26). While staffing mix has been a concern through the years, the increasing provision of health care services in non-hospital settings and the need to control costs have intensified concern over the required skill mix of health care personnel. Proponents of the positive impact of managed care on costs believe that market forces will adjust the size and composition of the health professions workforce (Bureau of Health Professions, 1997, p.1), since “substitution of providers based on their cost to the employer is a normal market behavior by employers” (Brewer, 1997, p. 267). Opponents, however, question whether the market alone can effect needed changes. They argue that the health care market is unique, and, historically, has not responded to the same forces as other markets.

Thus, substitution in the health professions is an extremely important issue, in today’s cost-conscious practice environment. In a competitive marketplace, employers seek the most cost-effective mix of providers, not simply the lowest cost, in order to control costs while ensuring quality (Cromwell, 1996). Substitution of nurses for selected duties of physicians and substitution of less prepared nurses (licensed practical nurses) and unlicensed assistive personnel for registered nurses are two major cost containment strategies. The data related to the costs and benefits of substitution of health care providers for nurses and the relationship to patient outcomes is inconclusive; therefore, at present, it is difficult to make informed or objective decisions regarding the most efficient skill mix of nurses and other health care providers (ANA, 1996; Yordy, 1996;).

“Market failures” in health care that lead to less than optimal provider mix may result from the following three causes. First, patients, who are not paying full cost of their care are not price sensitive; therefore, provider mix may not be as much of a concern for them. Second, the traditional relationship between doctors and hospitals, wherein doctors are given full autonomy to determine needed services, but are not mindful of costs, may result in less cost-effective management of hospital resources than otherwise might be possible (Cromwell, 1996). Third, both patients and providers lack information about the kinds of services patients actually need and the most cost-effective provider mix required. Therefore, the challenge to hospitals and other health care agencies is to determine an optimal skill mix of health care personnel, appropriately educated and with the capacity to adapt to changes in the nation’s health care system.

As changes have occurred in society, especially within the health care financing and delivery systems, the professions have been challenged to adapt. Driving them to adapt are society’s social contract with the professions, the marketplace for their graduates, health policy makers, and the desire for continued professional autonomy. This situation is further perpetuated by the shift in the provision of care from inpatient settings to outpatient and community-based health care delivery sites. Although all health care personnel are affected, nurses, because of their numbers, proportion of hospital staff and usual practice sites are especially affected.

#### Effects on Nursing Staff

To recapitulate, as a result of changes in the financing of health care, both hospital admissions and hospital stays have been reduced. Increasingly, more care is

being provided on an outpatient basis and in community-based settings. Both technological innovations and concerns for cost-effectiveness promote the shift of services to outpatient and community settings by allowing a growing number of surgical, medical and diagnostic procedures to be performed in these settings.

All of these factors are associated with decreased RN positions in acute care facilities and increase positions in community settings (ANA, 1996). Historically, the education and employment of nurses have been market driven. Managed care, a major vehicle of change in the financing and delivery of health care, has had a significant effect on the labor market for nurses. As previously stated, the spread of managed care has stimulated health care providers, particularly hospitals, to investigate alternative staffing patterns and settings for the provision of health care. Nurses, as the single largest group of health care personnel in most hospitals, are increasingly seeking jobs in non-hospital settings— nursing homes, clinics, physicians' offices, and patients' homes. This paradigm shift began in the early 1980s approximate to the introduction of the Medicare Prospective Payment System (Noble, Redmond, Williams, & Langley 1996). As an illustration, from 1988 to 1992, while nurse employment grew only 6% in hospitals, it grew 68% in outpatient departments, 63 % in public health and 15% in ambulatory care areas (Moses, 1995; Aiken & Gwyther, 1995).

The most recent picture of the RN workforce is provided by the findings of the National Sample Survey of Registered Nurses (Moses, 1997). These findings are clearly reflective of the trends in employment patterns began in the 1980s. According to the National Sample Survey of Registered Nurses (Moses, 1997), the estimated number of

individuals in the United States with current licenses to practice as registered nurses in March 1996 was 2,558,874. As shown in Table 5, of these, 82.7 percent, or 2,116,000 were actually employed in nursing. Sixty percent of the employed registered nurses or 1,271,000 were working in a hospital setting, of which most (1,083,000) were employed in an acute care setting. The total number of registered nurses employed in community-based settings was 542,000 (25.6%) and were employed as follows: 17%, or 363,000 were working in a community or public health setting; and ambulatory care settings accounted for 8.5% or 179,000 nurses. Nursing homes or other extended care facilities (long term care facilities) were the employment settings for 171,000 (8.1%) registered nurses. The remaining employed registered nurses (132,000 nurses or 6.2%) were working in other types of settings such as nursing education, national or state administrative offices or associations, or insurance companies (Moses, 1997). The employment patterns of newly licensed RNs from 1992 - 1996 reflect similar movement (Yocum, 1997). These trends have implications for the education of nurses.

#### Effects on Nursing Education

The goal of professional education is to produce knowledgeable graduates prepared for entry into contemporary professional practice. The literature is replete with evidence documenting mismatches between the education which aspiring professionals typically acquire and the nature of work demands encountered upon graduation (Cavanaugh, 1993; Brewer, 1997; Coffman, Blick & Wong, 1998). This disparity is due in part, no doubt, to the external forces outside the control of professional education such

Table 5

Employment Setting Of Registered Nurses Employed in Nursing. Selected Years, 1984 - 1996<sup>a</sup>

Employment Setting	1984		1988		1992		1996	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Acute Care Hospital (Non-federal, short term)	900,728	60.6	996,000	61.2	1,045,128	56.4	1,083,000	51.2
Non-federal Long Term Hospital; non-federal psychiatric, Federal government hospital and other hospitals	112,227	7.5	109,000	6.7	187,589	10.1	187,000	8.9
Long-term Care: Nursing home/Extended Care Facility	115,077	7.7	108,000	6.6	128,983	7.0	171,000	8.1
Community-based Settings: home health, ambulatory care, hospice, occupational health, public health department	264,838	17.8	307,000	18.7	394,114	21.2	542,000	25.6
Schools of Nursing	40,311	2.7	30,000	1.8	36,514	2.0	49,000	2.3
Other (Boards of Nursing, professional organizations and association, private duty, prisons and jails, etc.)	53,339	3.5	77,000	4.7	56,263	3.0	83,000	3.9
Total	1,485,725	100%	1,627,000	100%	1,853,024	100%	2,115,000	100

Note. From The Registered Nurse Population: Findings from the National Sample Survey of Registered Nurses. (1990, 1992, 1994, & 1997). by Moses,

E. Department of Health and Human Services, HRSA, "Employment Setting of Primary Positions of Registered Nurses employed in Nursing."

<sup>a</sup> Estimated Numbers and Percents.



as the proliferation of knowledge and technological advances. On the other hand, factors internal to the professions such as the bureaucracy of higher education and faculty resistance to change are believed to slow responsiveness to changing societal needs.

As a profession, nursing acquires recognition, relevance, and even meaning in terms of its relationship to the society of which it is a part. “The authority for the practice of nursing is based on a social contract that acknowledges professional rights and responsibilities as well as mechanisms for public accountability” (ANA, 1995a, p.3). Thus, nursing education has an obligation to ensure that graduates are prepared to meet present and future societal health care needs. Given the changes in the financing and delivery of health care services, it is anticipated that registered nurses will be expected to fill roles that require increased professional judgment, greater clinical autonomy and management of complex systems that span the traditional boundaries of service settings (Wunderlich, Sloan, & Davis, 1996). Additionally, the well-prepared nurse must be equipped to address the health of the individual, family and community along the continuum of care.

As previously stated, the current and emerging health care system requires a basic registered nurse workforce whose education prepares it to function across practice settings, to work independently and to provide a wide range of nursing services to individuals, families, groups and the community. The majority of the basic registered nurse workforce today, however, was not educated for this breadth and depth of roles, since they were educated to practice primarily in hospitals with a focus on “treatment of disease” [National Advisory Council for Nursing Education and Practice

(NACNEP), 1997]. Additionally, despite the fact that, in 1965, ANA adopted a policy for differentiation of nursing into technical practice, as performed by graduates of associate degree programs (AD) and professional practice, as performed by baccalaureate program graduates (BSN), very few health care agencies have required registered nurses to function on the basis of their educational preparation (Brannan, 1996; NACNEP, 1997). In most health care institutions, AD, BSN and diploma nurses are used interchangeably, without regard for differences in educational preparation and philosophical orientation. However, in a rapidly changing, cost conscious, health care delivery system, this practice is likely to be replaced by models that use staff in a more cost effective manner (O'Neil, 1997; Aiken, 1995). "The system will need the least costly worker for entry-level nursing practice, highly trained and experienced nurses in complex care settings, and nurses who have received even more advanced training for independent practice" (O'Neil, 1997, p. 4). Because managed care is associated with a slowdown in nurse employment growth in hospitals and a shift toward non-hospital settings, there is a need to examine how well the current nursing education programs achieve educational outcomes that are consistent with these emerging labor market trends (Buerhaus and Staiger, 1996; Brewer, 1997). Identification of core competencies required for practice across settings, upon entry to practice, is crucial. The information discovered will help to ensure that nurses are prepared with the knowledge, skills and abilities required for practice in the evolving health care delivery system. Accordingly, these requisite competencies will help determine the types and numbers of basic nursing education programs needed.

Given all the changes in health care and their potential effects on nursing

education and practice, two questions arise. To what extent is the current educational preparation of nurses adequate to meet society's health care needs now and into the future? What are those competencies registered nurses will need in order to practice effectively as new graduates?

### Educational Pathways for Entry into Nursing Practice

To answer the question "To what extent is the education of nurses adequate to meet society's health care needs?" one must consider the nature and expected outcomes of the basic nursing education programs. There are three major pathways for entry into professional nursing: 1) associate degree, 2) diploma and 3) baccalaureate programs. The associate degree program is a two year program usually offered by a community college. The graduate is expected to be more technically oriented and practice primarily in a hospital setting. The diploma program is usually three years in length and offered by a hospital or health care system. The graduate of a diploma program is prepared to function primarily in the acute care setting also. The baccalaureate program is a four year program, offered by a college or university and designed to prepare the professional nurse who is competent to function in all settings and to care for patients along the health-illness continuum. The National League for Nursing, the primary accrediting agency for nurses has identified expected competencies, slightly different, for each of the programs (NLN, 1989; NLN, 1992; NLN, 1993; NLN, 1998). Additionally, the American Association of Colleges of Nursing (1998) has identified expected competencies for baccalaureate graduates. A major problem associated with the educational preparation and expected competencies of nurses is the fact that graduates of all three programs write

the same licensure examination and are credentialed the same, "Registered Nurse."

When hired, the graduates are expected to function similarly. There is generally no differentiation in roles and responsibilities of nurses based upon educational preparation. Thus, differentiation in practice based upon educational preparation is more theoretical than actual.

The Health Personnel Report to Congress provides regular data about the nursing workforce (Bureau of Health Professions, 1996). In 1996, 58.4%, or 1,235,000 of the 2,116,000 employed registered nurses had less than a baccalaureate degree as their highest nursing-related educational preparation and an estimated 673,000 (31.8%) employed registered nurses had a baccalaureate degree. Of those below the baccalaureate level, 503,000 had diplomas and 732,000 associate degrees. Although the number of diploma graduates has been decreasing, there has been considerable growth in associate degree programs, which now produce almost twice as many graduates as baccalaureate and diploma programs combined (see Table 6). This trend concerns many in the nursing community and health policy makers who believe that the baccalaureate degree should be the basic nursing credential for entry into professional nursing and will be required of the RN in the emerging health care environment.

Many in the nursing community and policy makers, therefore, have deemed the nursing workforce, according to type of program and number of graduates, inappropriate to meet the needs of the evolving health care delivery system (NACNEP, 1997; Pew, 1993a; Vanselow, 1996; de Tornyay, 1993; Wunderlich, Sloan & Davis, 1996). Some of

Table 6

Number of Nursing Graduates According to Type of Program.Selected Years 1960 - 2000

Year	Number of Graduates <sup>a</sup>			
	Baccalaureate	Associate Degree	Diploma	Total
1960	4,136	789	25,188	32,073
1970	9,069	789	22,551	32,409
1980	24,994	36,034	14,495	75,523
1985	24,975	45,208	11,892	82,075
1990	18,571	42,318	5,199	66,088
1994	28,912	58,839	7,119	94,870
2000 (projected)	20,580	43,450	4,770	68,730

Note. U. S. Department of Health and Human Services. (1996). Ninth Report to

Congress: Health Personnel in United States. Washington, D.C.: Health Resources and

Services Administration. <sup>a</sup>Aggregated data. Estimated numbers.

the recommendations include a reduction in the number of entry-level nurses prepared via associate degree and diploma programs and modification of the curricular content to better prepare graduates to function in a health care system dominated by managed care. Expected competencies of graduates of the various entry level nursing programs, however, has been a source of debate for more than three decades. Current evidence is inadequate to determine if the performance of nurses varies by the type of basic nursing program from which they graduated (Joyce-Nagata, et al., 1989; VHA, 1992). Stated otherwise, the null hypothesis, that there are no differences among graduates of basic nursing education programs, cannot, on the basis of evidence, be rejected.

What are those competencies RNs will need in order to practice effectively as new graduates? To determine the core competencies required of RNs, one must keep in mind the changes in roles and responsibilities. Greater emphasis has been placed on case management and care coordination. These roles have emerged as a result of increased patient acuities and decreased hospital stays, leading to a need to enhance nurses' abilities to assess patients and their situations and provide patient and family education. Changes in the skill mix of direct care providers have resulted in an increased need for leadership and supervision skills for the management of other caregivers. Other factors influencing the need for new competencies are the rapid changes in knowledge, tools, technology and public expectations (Hoberman & Mailick, 1994).

The rapidly changing health care environment, accompanied by changes in the roles and responsibilities of nurses created a need for new competencies. There appeared to be an ever widening gap between the expected and observed behaviors of nursing

graduates. The nursing leadership acknowledged a need to modify the nursing curricula in order to better prepare graduates to practice in the evolving health care delivery system.

In 1987, therefore, the National Conference on Nursing Education was devoted to the theme “Curriculum Revolution: Mandate for Change.” The two major themes discussed were social responsibility of nursing education and the need for theoretical pluralism. The nursing community had come together under the auspices of the Society for Research in Education, known later as the National Advisory Council of the National League For Nursing, and raised the following questions: “How do we more adequately prepare nurses?” “What would a responsive curriculum look like?” “What innovations in clinical teaching would best enable graduates to practice effectively in today’s health care market?” (Bevis, 1988).

The curriculum revolution was, in part, a response to the realization that the behavioral model of nursing education, based upon Tyler’s Model, was not appropriate to meet the changing health care needs of society. A different curricular perspective was required. Defined by Bevis (1988) as the fifth “turn” in nursing curriculum, this process was termed a revolution. The Tyler Model had dominated the curriculum development process in nursing education since 1950. It was based on the concept that all curriculum development must result in certain prescribed outcomes: a philosophy; a conceptual framework; behaviorally defined, measurable objectives; and development and selection of learning activities. Having been incorporated into the accreditation criteria for NLN and various state boards of nursing, the Tyler Model helped elevate nursing’s perceived professional status by providing the needed structure to nursing education and practice

(Bevis, 1988).

For the first 30 years after introduction of the Tyler Model, nursing education was focused primarily on psychomotor skill development. In the late 1980s, the nursing community identified a need for increased emphasis on intellectual skills such as “analytical, problem-solving and critical thinking skills and increased emphasis on basic, fundamental attitudes and values.”(Bevis, 1988). To meet this need the nursing community called for major change in the curriculum development process for the preparation of nurses, with a focus on “education versus training” (Bevis, 1988). Theoretical pluralism, it was thought, would allow nursing to be socially responsive and still have control over curricular decision making (Tanner, 1990). Nursing education’s responses, however, did not keep pace with the dynamic, sometimes volatile, health care environment, extending the gap between the expectations of nursing education and that of nursing staff and nurse executives.

### Clinical Experiences

The nature of clinical experiences for nurses has also slowed nursing’s responsiveness and widened the gap in performance expectations. Clinical experiences have long been recognized as a significant and essential part of nursing education (Spence, 1994; Brannan, 1996). They provide students with the opportunity to consolidate knowledge, develop psychomotor skills, socialize into the professional role and acquire professional values. Nursing has been practiced primarily in hospitals since the 1930s. In a like manner, nursing curricula have been structured to reflect these “known” practice areas (Kupperschmidt and Burns, 1997) i.e., institution-based in the



acute care environment. In response to the rise of managed care and the accompanying shift in health care delivery from hospitals to community-based settings, clinical experiences should provide the student the opportunity to think critically, transfer knowledge, and apply basic concepts and principles in a variety of delivery models and settings.

The prevailing model, in which clinical experiences for undergraduate nursing students occur primarily in the acute care facility is no longer appropriate. Clinical experiences need to include any and all settings where patients seek health care. RNs should be flexible and highly skilled, whether employed in hospitals or non-hospital, community-based settings. Additionally, graduates must possess a broad understanding of all the determinants of health such as the environment, socioeconomic conditions, behavioral health care and human genetics to be able to effectively fulfill their roles. More importantly, it is time to shift the focus of nursing education to the patients and their needs rather than the setting in which the care is provided (Noble, et al, 1996; Tagliareni & Murray, 1995; Hunt, 1998). This would require the new graduate to possess a broad core set of knowledge, skills and abilities.

#### Recommended Changes to Meet Needs and Expectations of 21<sup>st</sup> Century

The literature of the past two decades is replete with anecdotal evidence and numerous recommendations for changes in the educational preparation of nurses (Aiken, 1995; Hadley, 1996; Korniewicz & Palmer, 1997; de Tornyay, 1995; Bellack, 1995; Anders, Douglas & Harrigan, 1995). The Pew Health Professions Commission is one of many national policymakers that has issued a call for changes in health professionals'

education and practice. Pew was founded upon the belief that the education and training of health professionals are inconsistent with the evolving health needs of the American people (Shugars, O'Neil, & Bader, 1991). Pew identified expected competencies for successful health professional practice in the future. These competencies center around community-based health care, provided by multi-disciplinary health care personnel in a cost-effective, resource efficient manner. According to Pew, health professionals will have to integrate a range of services across professional, disciplinary and institutional settings. In 1995, one of the critical challenges for revitalizing the health professions for the 21<sup>st</sup> century identified by Pew was to restructure education to assure the development of the core competencies required for practice. Additionally, Pew (1995b) recommended that the size and number of nursing education programs be reduced by 10 - 20%, particularly associate degree and diploma programs in order to prepare nurses with the appropriate knowledge and skills.

The nursing leadership [National League for Nursing (NLN), the American Nurses' Association (ANA), the American Association of Colleges of Nursing (AACN), the American Organization of Nurse Executives (AONE)] has played a key role in arguing for changes in the education and practice of nurses also. The NLN recognized the need for curricular reform to support health care reform and published "A Vision for Nursing Education" in 1993, identifying strategies for successful implementation of "Nursing's Agenda for Health Care Reform." Two of the key recommendations from that document are: 1) All nurses should be prepared to function in a community-based, community-focused health care system; and 2) The number of RNs prepared at the

baccalaureate, masters' and doctoral levels should be increased (NLN, 1993a). The nursing community has repeatedly said that the reformed health care system requires a nurse with different knowledge and skills than the nurse prepared for the hospital-based, provider-driven, fee-for-service health care system (Lindeman, 1996; NLN, 1997; AACN, 1998). Fairly consistently, it has been stated that the aim of nursing programs today should be graduates with core competencies who are generalists in a health care (rather than illness-focused) system (NLN, 1997; AACN, 1998). According to Hadley (1996), "In the managed care marketplace, the major threat to nursing is the fact that many RNs lack the education to work autonomously outside hospitals and institutional settings" (p. 9). Lindeman (1996), therefore, has identified, what she believes to be, the five most important outcomes from an undergraduate nursing program: critical thinking skills, relationship-centered care skills, care management skills, primary care skills, and community focus skills.

The difficulty of changing the established patterns of professional education and practice should not be underestimated. Though strong external forces encourage change, there are many internal and intraorganizational forces that inhibit it, such as a complex web of public and private interests, professional and governmental policies and institutional prerogatives.

Now, as in the past, hospitals are still the primary employers of nurses, particularly new graduates (Moses, 1997; ANA, 1996). Home care agencies and ambulatory settings generally do not hire novice nurses because of the belief that new graduates lack the experience, nursing judgment and confidence needed to work in these

relatively unstructured environments (Kenyon, et al., 1990; ANA, 1996; AACN & ANA, 1997). To change this belief, collaboration between nursing education and nursing service in curricular revision is essential. Nursing staff, nurse executives and nursing faculty must work together to identify the requisite competencies, design appropriate curricula, and identify strategies to remove barriers to community-based practice.

One recent document describing the need and recommendations for change in nursing curricula is the “Essentials of Baccalaureate Nursing Education for Professional Nursing Practice,” (AACN, 1998). The American Association of Colleges of Nursing convened focus groups at two invitational roundtable meetings and a series of regional meetings to seek input into the development of a standard describing what can be expected of new nurses at the time of graduation from baccalaureate-degree nursing programs. Project participants represented 49 states, 349 schools of nursing, 19 health care agencies, and 23 professional organizations. The core competencies identified were critical thinking, communication, assessment and technical skills. The core knowledge included health promotion, risk reduction and disease prevention, illness and disease management, information and patient care technologies, ethics, human diversity, global health care, and health care systems and policy. While this document does not present findings of empirical research, it describes the general consensus among the nursing community about the core competencies and knowledge one should expect of baccalaureate nursing graduates. What it lacks is adequate input from nurses employed in health care agencies— nursing staff and nurse executives.

The National Council of Associate Degree Programs initiated, in 1998, a process

to identify knowledge, skills and abilities needed by Associate Degree nurses for practice in the emerging health care delivery system. The competencies identified in the first draft are as follows: assessment, collaboration/communication, managing care across the health care continuum, caring interventions, clinical decision making, professional behaviors and teaching and learning. Although a preliminary document, the competencies listed above are fairly consistent with those identified by AACN as expected competencies of baccalaureate graduates and to some degree represent a convergence of expectations among faculty of basic nursing education programs, further complicating the educational scheme for nurses.

The competencies of diploma graduates as identified by the NLN accreditation council likewise include critical thinking, communication abilities and therapeutic nursing interventions (NLN Interpretative Guidelines for Standards and Criteria, 1997). These competencies are the expected program outcomes of diploma programs. They do not restrict practice to the acute care facility.

Given the dynamic health care environment and the pressures for change it imposes on nursing practice and ultimately nursing education, the purpose of this study is to describe the educational outcomes for which nursing faculty must strive in order to produce graduates who will be able to function effectively across settings now and into the future. The purpose of this study is not to compare expected competencies of the various basic nursing programs to each other; therefore, specific research related to differentiation based upon educational preparation is not considered. However, the research to be discussed will help to answer the question, "What outcomes of basic

nursing education programs are required? Stark and Lattuca (1997) have developed a conceptual framework, “Academic Plans in Environmental Context,” that helps to examine the influences of external, intraorganizational and internal forces bearing on the educational environment of nursing students and the resultant educational outcomes. The specific question the study seeks to answer is “What are the core competencies required of new graduates in order to practice effectively in the evolving health care delivery system?” These are the knowledge, skills and abilities required, not the level of educational preparation.

National health policy makers, as previously discussed, (Aiken, 1995; Buerhaus & Staiger, 1996; NACNEP, 1996; Pew, 1995) have challenged nursing to produce the right numbers and types of nurses, with the appropriate competencies for the evolving health care delivery system. The complexity of three entry routes, a common entry examination, general confusion regarding differences in function, and lack of empirical data supporting educational differentiation are compelling reasons to describe required educational outcomes (core competencies) and use them to define the necessary educational preparation.

#### Research Related to the Education and Practice of Nurses

As previously discussed, the ongoing changes in the financing and delivery of health care services have affected the numbers and types of personnel needed. Health professionals, particularly entry level registered nurses are being ask to assume expanded and sometimes new roles and responsibilities. The “entry to practice maze” creates a potential problem for newly licensed registered nurses. After more than three decades of

discussion and debate, there is still considerable debate and confusion in the nursing community about the appropriate education for “entry to nursing practice.” Additionally, the nursing community has not been able to facilitate differentiated practice based upon education, experience and competencies. Differentiated practice requires clearly stated educational outcomes. Thus, this research study sought to determine the educational outcomes for which nursing education programs should strive to produce in order to prepare nurses for practice in the evolving health care delivery system. To determine those outcomes, it was necessary to assess not only the health care environment in which nursing is practiced, but also, the performance expectations of new graduates from the perspectives of persons who select and hire nurses (nurse executives), persons who prepare nurses for the job (nursing faculty) and persons who perform the job (nursing staff).

Empirical research related to outcomes of basic nursing education programs for practice in the evolving health care delivery system is limited. The usual approaches to determining core competencies are a consensus-based approach, using expert practitioners and job analyses. Studies conducted during the 1970s and 1980s focused on psychomotor skill development of registered nurses, comparing graduates from the various basic nursing education programs. Job analysis and role delineation studies are regularly conducted by boards of nursing and are used to design and/or revise the licensure examinations (Yocum, 1996; Yocum, et al., 1997). Other related investigations focus on expected and evidenced competencies of nursing graduates (often limited to a single work setting, e.g., home health) or compare the knowledge, skills and abilities of

graduates of the various types of basic nursing education programs. The review of related research is divided into three categories: 1) perceptions of expected and observed behavior of new nursing graduates; 2) competencies for a particular community-based setting, e.g., home health or ambulatory care; and 3) core competencies for practice across work settings.

In Virginia, the last major study addressing competencies of graduates of basic nursing programs was conducted in 1992 by the Virginia Hospital Association (VHA). This study explored the expected and observed behaviors of graduates of all types of basic nursing education programs. The findings of this study were similar to that of Joyce-Nagata, et al., (1989) who surveyed directors of nursing to assess expected versus observed competencies, specifically, of baccalaureate degree graduates in Mississippi. A two-part questionnaire was administered to 142 directors of nursing in health care settings (hospitals,  $n = 121$ ; nursing homes,  $n = 9$ ; community agencies,  $n = 12$ ). Sixty-seven sub-competencies were categorized under seven major competencies. Of the 67 sub-competencies, slightly more than half ( $n = 34$ ) had a significant difference between expected and observed behavior. The major performance gap was “application of the nursing process,” which includes assessment, planning, intervention and evaluation. Although the investigators included hospitals, long term care and community-based agencies in the study, they limited participation to nurse executives, excluding the perceptions of nursing faculty and nursing staff.

The VHA study (1992), on the other hand, examined the perceptions of employers (primarily nurse executives) and nursing faculty. Eighty hospital nurse executives and 22



nursing school administrators were surveyed to determine their perceptions of basic nursing program graduates' expected behavior and actual performance. Twenty six competency statements were rated using the following descriptors: 1) "Must be able to perform this activity;" 2) "Would like to have the graduate RN perform this activity;" and 3) "Does not need to know how to perform this activity." The instrument focused heavily on technical skills, with several items referring to medication administration and the ability of the new graduate to care for varying numbers of patients. There were significant gaps between the perceptions of the two groups for 6 of the 26 competency statements. In answer to the open-ended question, "Do new RNs meet expected competencies?" schools of nursing respondents unanimously agreed that they do. Hospital executives disagreed. Only 46.8% of hospital respondents answered positively (VHA, 1992). Unlike nursing faculty, hospital executives perceived new RN graduates as deficient in major patient care skills, communication skills, and management and organizational skills. Both groups (nursing faculty and nurse executives), however, agreed that intellectual skills such as critical thinking skills, problem solving ability, and interdisciplinary team skills are essential for future nursing practice.

Using an adaptation of the instrument employed in the VHA (1992) study, Anders, et al. (1995), surveyed deans of six schools of nursing and 82 managers or nurse executives in health care agencies in Hawaii to determine their perceptions of new registered nurse graduates. Congruent with the findings in the VHA Study (1992) the investigation revealed marked differences between perceptions of respondents from health care agencies and those from schools of nursing regarding new graduate

competencies. The major gaps were in the use of the nursing process, documentation, and the ability to confer with physicians and other health professionals.

The research studies cited addressed the perceptions of expected and observed behavior of new RN graduates. For the most part, they focused on hospitals (acute care) and nursing homes (long term care). As the provision of health care is shifting to the community, there is a need to review research that addresses more specifically competencies for particular community-based settings, e.g., home health or ambulatory care. Descriptions of such research follow.

Home health is experiencing considerable growth as patients' hospital lengths of stay are decreasing. Kalnins (1989) conducted a study of preferences for staff nurse qualifications in home health agencies ( $n = 287$ , 12 states) and agency practices in orienting new staff nurses. The instrument used in the study included 12 general qualifications, e.g., Bachelor's in Nursing and course work in community health (not necessarily specific competencies) and eight clinical skills. The investigators did not ask specifically if the agencies hire new graduates. Rather, they sought to determine qualifications for hire. The qualification for hire with the highest mean rating for the total sample was a "defined period of medical surgical nursing experience" (required by 61% of agencies). This is an important finding given the current downsizing of hospitals and predicted shift of locus of care to the community. More importantly, it raises a question that was not asked in the study, "What are those competencies that a nurse develops within a defined period of medical-surgical nursing experience?" A preliminary survey of nurse executives in community-based settings conducted by the Virginia Nurses'

Association in 1997 found that the nurse executives were unable to articulate the competencies expected from that experience. No other research was found to answer that question.

Ark and Nies (1996) approached the issue of expected competencies differently. In a study with a limited sample size ( $N = 16$ ), in which slightly more than half of participants ( $n = 9$ ) had two years or less experience in home health care nursing, the investigators examined the perceived knowledge and skill sets of home health nurses. The findings, however, were fairly consistent with those of the VHA study. Respondents rated physical assessment knowledge and skills highest and venipuncture skills second. Communication ability was rated third for both knowledge and skill. In this study of competencies required for home health practice, technical skills were generally rated higher than knowledge parameters.

Godin (1996) asserted that the competencies previously identified as basic nursing education program outcomes by NLN (1989; 1992; 1993b) were also overwhelmingly hospital focused and recommended a study of nurses currently practicing in the community-based settings to determine, based upon experience, their perceptions of needed knowledge and skills for effective practice. Murray (1998) surveyed experienced home health nurses and identified time management skills, ability to function autonomously and clinical competence in a variety of practice settings as essential for effective home health practice. Although intellectual skills were deemed important, Cleary, Lacey & Beck-Warden (1998) found that community employers placed greater importance on clinical competence, assessment skills, and technical skills.

Haas and Hackbarth (1995), on the other hand, surveyed practicing staff nurses for the purpose of identifying the scope and core dimensions of ambulatory practice--current and future. Eight core dimensions of current clinical practice and nine of the future role of the nurse were identified. Technical, interpersonal and intellectual skills were among the eight core dimensions. Additionally, three core dimensions of the quality improvement and research roles were specified. Based on the study findings, it was concluded that although core dimensions of ambulatory practice can be identified, the setting in which nurses practice influences the core dimensions, i.e., there is increased emphasis on particular dimensions in certain settings. For example, the importance of telephone communication skills was rated higher by HMOs than by hospitals.

Much of the research discussed has focused on identifying the needed competencies from the perspective of a singular practice site, e.g., home care or ambulatory care. From an academic perspective, it is necessary to identify the core competencies that nursing graduates must possess in order to function in entry level positions in all settings (NLN, 1997; AACN, 1998). Thus, there is a need to look at research that focuses on core competencies for practice across work settings, described as follows.

The American Nurses Association (ANA) supported the conduct of a two phase qualitative and quantitative study in 1995 to identify skills registered nurses would need to make the transition into various non-acute care employment sectors such as home health, long-term care and ambulatory care or to remain in acute care. The sample consisted of representatives (primarily nurse executives,  $n = 185$ ) of four health sectors:

hospitals, home health agencies, nursing homes and health maintenance organizations (HMOs). Nineteen competencies were identified and rated according to importance for practice in the evolving health care delivery system. Experience was more important than education for all settings. In fact, the majority of HMOs and home health agencies indicated that they did not hire new graduates. There was a lack of consensus among respondents according to health sectors, suggesting that differences were perceived in the competencies required for different work settings. Kenyon, Smith, Hefty, Bell, McNeil and Martaus (1990) asserted also that the skill levels and concepts required for community health nursing are different from those required for the acute care setting. Job analysis studies conducted by the NCSBN (Yocum, 1997), on the other hand, found no significant differences in the competencies required across settings.

Chalmers, Bramadat, and Andrusyszyn (1998) conducted a study to explore the educational preparation required for community health nursing practice. Focus group interviews and self-administered questionnaires were used to determine current, past, and future community health practice from the perspectives of staff nurses, administrators, and educators. The role of the community health nurse was seen by all participants as more complex and involving a greater breadth of practice than a decade ago. Participants identified a need for increased independence, responsiveness to community needs, and increased supervisory skills. Respondents acknowledged the gap in knowledge and skills between community health nurses and nursing students--questioning the adequacy of the educational preparation of nurses for entry-level positions in community health.

The differences between performance expectations and perceptions of observed

behavior indicate a lack of consensus in the nursing profession about the specific competencies needed by nurses upon entry into practice. Some have suggested that this difference in expectations may contribute to lengthy and costly periods of orientation for nursing graduates (American Hospital Association, 1991; Virginia Hospital Association, 1992) or to the establishment of qualifications for hire that exempt new graduates from employment in particular work settings, e.g., ambulatory care or home health [American Academy of Ambulatory Care Nursing and American Nurses' Association (AAACN & ANA), 1996; Kalnins, 1989]. Kenyon and others (1990) asserted that providers other than hospitals, must assume responsibility for extended orientations and continuing education, if needed, by new hires.

Most in the nursing community, however, agree that new graduates must be prepared to practice in a wide variety of settings and to assume multiple entry level roles (Buerhaus & Staiger, 1997; AONE, 1996). To assess the expected competencies of new graduates, the National Council of State Boards of Nursing (NCSBN) conducts regular job analysis and role delineation studies. In job analysis and role delineation studies conducted by the NCSBN, respondents are usually asked to rate each competency with respect to its importance, frequency of performance and degree of difficulty for a beginning RN to perform (Yocum, 1996). This study differs from the job analysis of newly licensed registered nurses sponsored by the NCSBN (Yocum, 1997) in that it assessed the perceptions of nursing staff, nurse executives and nursing faculty regarding expected competencies. The job analysis focuses on a comprehensive listing of tasks (170 activities) registered nurses perform and is limited to the perception of newly licensed

registered nurses, with an average of five months nursing experience. Asking people with experience in the job provides a different perspective on expected competencies.

Many changes that will affect RNs will not be fully appreciated until some time in the future. Thus, nursing education must be prepared for change. Hunt (1998) and Bellack (1998) assert that nursing in acute care and community-based settings does not require widely different knowledge and skills, although the philosophy and values of the providers in those settings may differ. The expected competencies are fairly consistent across work settings for entry level RNs, building a case for the identification of “core” competencies. The competencies repeatedly recommended by researchers as essential for future nursing practice include intellectual skills such as analytic thinking, critical thinking, problem solving ability, communication skills, leadership skills and interdisciplinary team skills (Anders, et. al., 1995; VHA, 1992; Cleary, Lacey & Beck-Warden, 1998; Joyce-Nagata, et al., 1989; Manuel & Sorensen, 1995; Yocum, 1996). Researchers continue to identify clinical technical skills, however, as essential now and into the future (Manuel & Sorensen, 1995).

Repeatedly, investigators recommended better collaboration between nursing faculty and nursing service representatives as a means to bridge the gap between expected and observed competencies and to ensure better preparation of novice nurses (VHA 1992; Joyce-Nagata, et al., 1989). The core competencies--essential knowledge, skills and abilities--necessary for entry level RN practice must not only be acknowledged but must also be consistent with educational program outcomes. Central to assessing outcomes of nursing education programs is the determination of the degree to which the graduates of

the programs are meeting the expectations and demands of consumers and employers to deliver the health care.

### Summary

To recapitulate, the health care delivery system, now more than ever before, is undergoing rapid changes, and the restructured health care system requires utilization of the most cost effective providers and therapeutic options in the most appropriate settings. Yet, there is a sparsity of empirical data in the literature related to the most cost effective skill mixes. Also, we have seen that change has been slow in the health professions education arena, producing a worrisome gap between present competencies of graduates and those needed for practice now and into the future. Employers of nurses, particularly community based agencies, continue to require a prescribed number of years of acute care nursing experience prior to hire. As the size and staffs of hospitals are downsized, one can no longer expect that neophyte nurses will have or be able to get one to three years of hospital experience prior to seeking a position in a community-based site. Nurses must be prepared for the “role” of registered nurse, not a particular work environment. As the nursing curricula are being revised, it is essential that the faculty is informed of the knowledge and skills required for effective practice across settings. As social institutions, schools of nursing must be responsive to external, intraorganizational and internal influences; and produce a product that meets society’s expectations and is consistent with the mission of higher education and the profession.

The evolving marketplace is looking at outcomes, specifically, “What are employees able to do?” “Can they provide the needed care in the most cost-effective



manner?" The employer expects that the graduate will be a productive employee with minimal orientation, within a short period of time after hire. With fewer hospital positions available to new nursing graduates, home health agencies and other community-based settings are being pressured to rethink their traditional practice of requiring at least one or more years of acute care, medical/surgical nursing experience as a qualification for hire. Even more importantly, these agencies are being asked to articulate the competencies that are expected to be developed as a result of that period of medical-surgical nursing experience.

Conclusive research and consensus within the nursing community do not exist regarding the core competencies newly licensed registered nurses need in order to function in acute care hospitals, long-term care facilities and community-based settings upon entry to practice. Although the nursing community has identified expected competencies for each of the three basic nursing education programs, there is no differentiation in practice according to educational preparation of entry level RNs. Furthermore, nurses have not definitively articulated the expected outcomes (knowledge, skills and abilities) of "one or more years of medical-surgical nursing experience in an acute care facility." Therefore, a need existed to describe and compare the perceptions of nursing staff, nurse executives and nursing faculty in Virginia regarding expected competencies for entry level nursing practice in order to reach a consensus regarding the core competencies required for this practice now and into the future.

## Chapter 3

### Conceptual Framework and Methodology

#### Introduction

This investigation was designed to describe the core competencies nursing graduates must possess in order to function across clinical settings and in multiple positions upon entry to practice. The conceptual framework, research design, setting, sample selection procedures, data collection methods and data analysis plan are described in this chapter.

#### Conceptual Framework

The conceptual framework for this research study is based upon the work of Stark, Lowther, Hagerty and Orczyk (1986a). This framework was developed through a grounded theory approach and expanded upon the internal and external influences on the curriculum identified by the Carnegie Foundation for the Advancement of Teaching and the aims of education as defined by McGlothin. Although there other conceptual frameworks for the study of health professions education and the effect of multiple influences on the curricula, this framework is most appropriate for this study because it is an outcomes-based approach. In an era of increased educational accountability, an outcomes-based approach is appropriate. The effect of the interacting forces on the outcomes of nursing education programs are described. Effective redesign of nursing

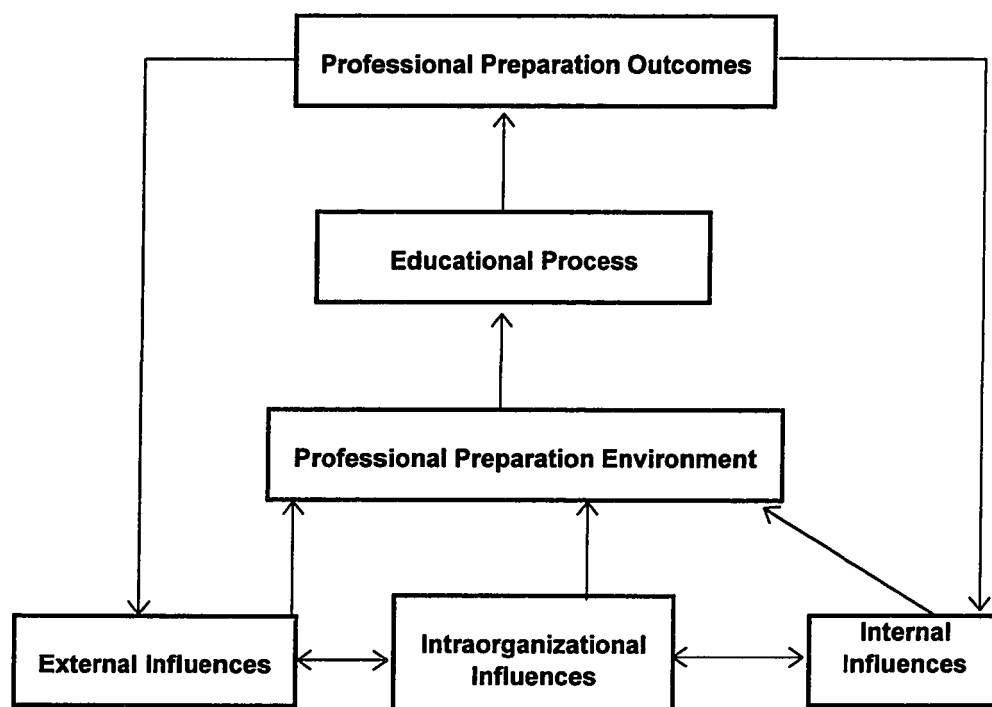
curricula is dependent upon identification of expected program outcomes, given the current professional preparation environment (culture).

This conceptual framework was developed to facilitate understanding of both the similarities and differences among pre-service professional education programs (Stark, et al., 1986a). Nursing was one of 12 professional programs considered in the study. Although the focus for the development of the framework was degree programs in four year colleges and universities, it can be applied to nursing education since one of its multiple entry points is a degree program. The framework allows systematic comparisons of professional education elements that may vary over time and across disciplines. Use of the framework and its associated constructs clarifies the language and enhances discussions of program influences, processes and outcomes. Additionally, the framework can be used to guide research into preservice professional education (Stark, et al., 1986a).

#### Components of the Conceptual Framework

Figure 1 depicts the major components of the framework. “Briefly, it asserts that professional preparation programs are influenced by external, intraorganizational, and internal forces. These forces interact to create a professional preparation “environment,” which, in turn, influences the design of educational processes intended to achieve professional preparation outcomes” (Stark, et al., 1986a, p. 236). Because of a feedback loop, the extent to which the outcomes are achieved likewise influences the external, intraorganizational, and internal forces. The three sets of forces may interact in different ways for different professional fields producing disparate outcomes.

Figure 1 Key Components of Conceptual Framework



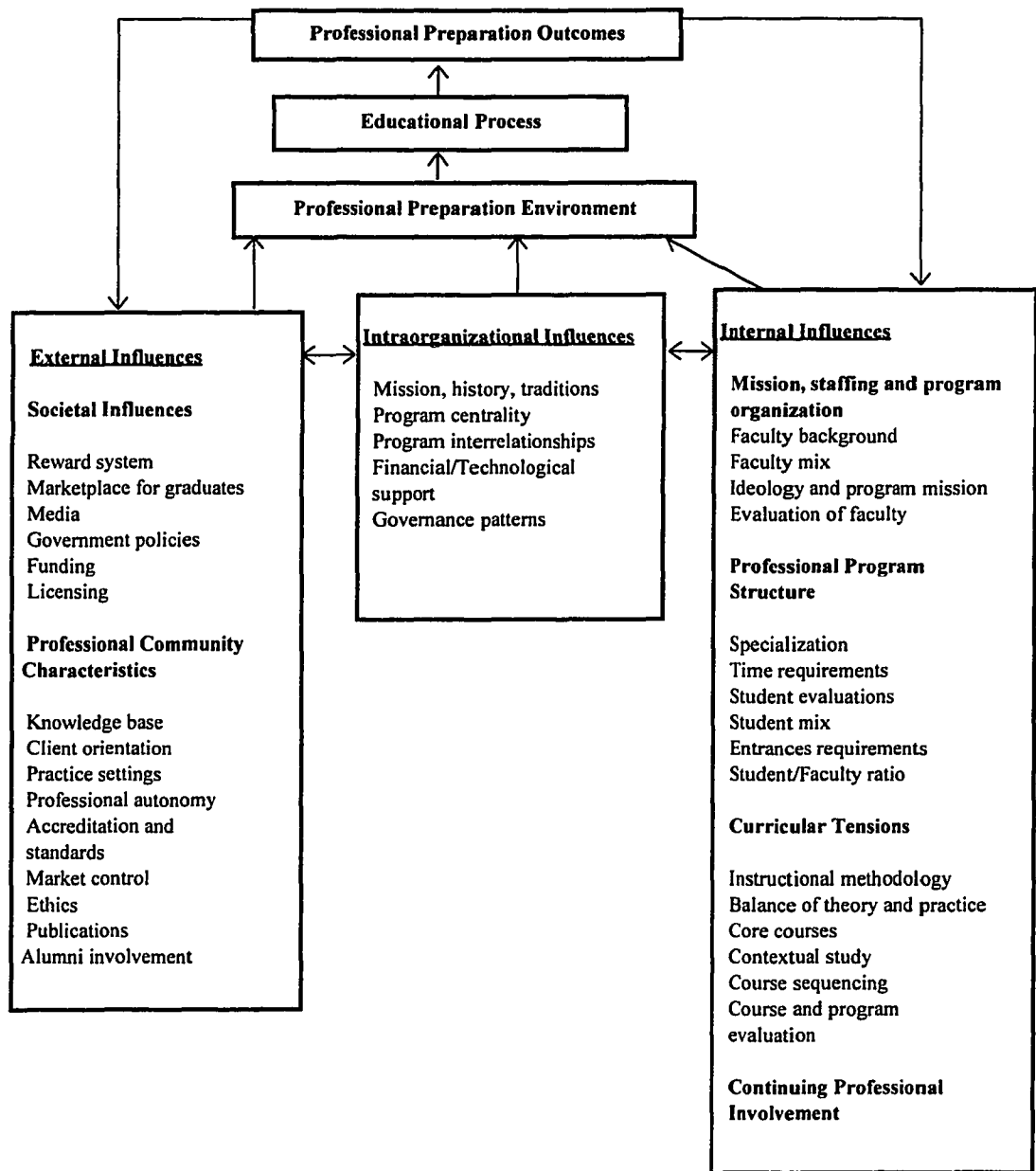
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### External Influences

Figure 2 further describes the previously identified three major forces--external, intraorganizational and internal-- interacting on the professional preparation environment. "Society at-large" and the "professional community" are the two primary categories of external influence. Both of these subcategories are further defined. Although all of the subcategories associated with the "society at-large" are relevant to the education of nurses, the ones that are most important to this study and require further discussion are the marketplace for graduates and government policies. The subcategories under professional community characteristics identified in the framework that warrant consideration and discussion include knowledge base, client orientation, practice settings, professional autonomy, accreditation and standards, and market control.

Marketplace for graduates and market control may be discussed together. Nursing has been very sensitive to effects of the market, demonstrating vacillating periods of shortage and excess. Since the turbulence of the marketplace will affect nurses, they need to prepare for the inevitable dislocation that will occur as the result of hospital downsizing and other dramatic changes in the delivery of health services (Hadley, 1996). Staffing patterns by hospitals and other health care delivery sites influence the production, roles and responsibilities, and employment of nurses. Additionally, the market either supports or rejects the professional roles adopted by the various health professions (Osterweiss, McLaughlin, Manasse & Hopper, 1996). As the delivery of health care is becoming more community-based, there is a demand for nurses who are prepared to function there. Society is holding educational institutions accountable



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for producing graduates who can meet the needs of society at an affordable public cost (Halstead, Rain, Boland, & May, 1996).

Changes in government policies, particularly those related to the reimbursement practices associated with health care, have had and are likely to continue to influence the preparation of nurses. Changes in reimbursement for health care services (led by Medicare policies) have pushed health care agencies to reexamine the skill mix and roles and responsibilities of all health care providers. Being the largest single group of health care providers, nurses have been affected. The economic pressures and the growth of managed care have placed further strain on deliverers of health care services. Additionally, policies associated with the funding of nursing programs, for example, the Nursing Education Act and the Medicare Reimbursement Program for allied health professions education, have influenced the numbers and types of basic nursing education programs for nurses (Aiken & Gwyther, 1995).

Given the changes in the marketplace for nurses and in government policies, the knowledge base of nurses is a major concern. We are in the midst of an information age, characterized by a knowledge explosion. Traditionally, the nursing curriculum has been very content-laden, with the focus on “knowing all that is to be known” in order to practice effectively. This is no longer possible. As forces from within and outside of nursing, within and outside of higher education, have exerted influence on nursing, faculty have been challenged to determine what to keep and what to delete from the curriculum. Piecemeal curricular change, such as merely adding nursing home or home health observational experiences, has not been effective (NLN, 1997; Bellack, 1998).

The nursing community has recognized a need for a curriculum revolution, systematic change characterized by a move from “content-orientation” to a “process-orientation.” In order to prepare nurses for practice in a dynamic health care delivery system, the curriculum, similarly, must be dynamic. It must allow rapid responses to support the current and future changes in the financing and delivery of health care and employment patterns of nurses.

The changes in client orientation and practice setting are significant factors affecting the education and practice of health professional students now and into the future. The shifts from a focus on the individual to a community focus and from acute care to community-based care are driving forces. As a result of these paradigm shifts, society is questioning whether nurses are properly prepared to practice in the emerging health care delivery system. Additionally, faculty are being asked to revise curricula. In order to accomplish this, nursing educators need to be informed first of the expected program outcomes-- a rationale for the conduct of this study.

Professional autonomy refers to self governance by the professions, usually delegated to the professional associations, accrediting bodies and licensing or certifying agencies. As such, professional associations, accrediting agencies and accreditation standards are very powerful forces affecting the environmental culture. They may encourage or inhibit curricular change. Professional associations work to protect the practice boundaries of the respective disciplines, thereby influencing the expected roles and responsibilities as well as knowledge, skills and abilities required for effective practice. Accreditation standards usually address program mission, design, processes and



outcomes. Thus, professional autonomy influence the educational environment and ultimately the educational outcomes of basic nursing education programs.

### Intraorganizational Influences

Intraorganizational influences refer to the relation of the professional program to the university, forces within the college or university but external to the professional program. The subcategory of “Mission, history and traditions” is of particular significance to this study. As social institutions, colleges and universities have an ethical responsibility to ensure appropriate and adequate supplies of health professionals. They affect supply through their authority to determine type, character and size of health professional programs and schools. Higher education and its schools have been encouraged to examine their mission and traditions— to engage in multiple paradigm shifts— to balance social relevancy and responsiveness while maintaining academic autonomy. As such, this is nursing’s challenge.

### Internal Influences

Stark and others (1986a) presented the internal influences in four primary subcategories: Mission, Staffing and Program Organization; Professional Program Structure; Curricular Tensions; and Continuing Professional Involvement. Although each of these categories is important to the education of nurses, for this study “Curricular Tensions” is of particular significance. A discussion of the curricular tensions aids in understanding the rationale for conducting the study. A major curricular debate in nursing is the issue of basic preparation (associate degree, diploma, or baccalaureate degree) for entry into practice. A closely associated debate is differentiation of practice

according to basic nursing educational preparation. Although the NLN and others within the nursing community have attempted to differentiate program outcomes according to type of nursing education program completion, for the most part, this is not reflected in practice settings. This study avoids these debates by focusing on program outcomes rather than levels of education or training. Focusing on core competencies helps answer the question, “What knowledge and skills must the nurse possess, upon entry to practice, in order to function effectively in the emerging health care delivery system?” and provides direction for answering the question, “How should nursing curricula be redesigned in order to produce graduates with the required competencies?”

#### Professional Preparation Environment

As previously noted, the interaction of the external, intraorganizational and internal influences on the professional program determines the “professional preparation environment.” The “professional preparation environment,” also referred to as the “organizational culture,” is a key element of the framework. “This environment serves as a mediating variable between these influences and the educational processes” (Stark, et al., 1986a, p. 236). Systematic study of educational outcomes, therefore, requires concurrent consideration of the above three forces, the environment in which they interact and the educational processes utilized.

#### Educational Processes

The educational processes refer to, but are not limited to, the curricular design, teaching/learning processes and evaluation strategies. Although this study was designed to identify the core competencies of nursing graduates for practice across settings and in

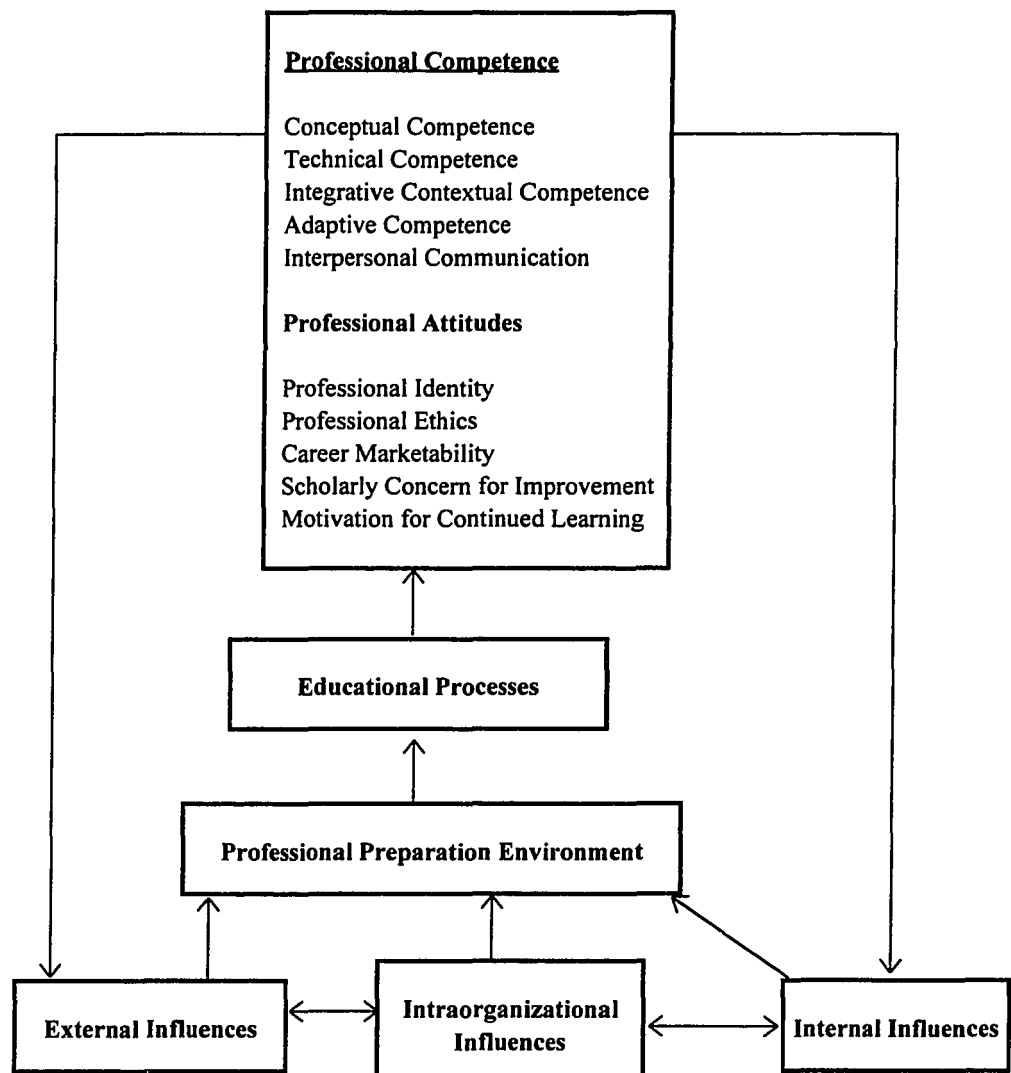
multiple roles, it is anticipated that educators will be able to use the information to determine the most appropriate processes to ensure these outcomes. The framework will aid in explaining the relationships among the professional preparation environment, educational processes, and professional outcomes.

### Professional Preparation Outcomes

Stark and others (1986b) drew upon the prior work of others to identify two major professional preparation outcomes--professional competence and professional attitudes (see Figure 3). Professional competence, as described, is composed of six dimensions: conceptual, technical, integrative, contextual and adaptive competencies; and interpersonal communication. Conceptual competence refers to having the necessary knowledge; whereas, technical competence refers to possession of the psychomotor skills. Integrative competence is the ability to apply knowledge to practice in order to function effectively.

The “fully competent professional must be able to identify the applicable foundational knowledge and combine it with the appropriate technical skills to perform the proper functions in a given setting” (Stark, et al., 1986a, p. 245). In other words, the graduate must possess “professional judgment.” Nursing, like most health professions, must provide experiences in which the student will be able to integrate theory with practice. Outcomes evident upon entry to practice are particularly important. Examining student outcomes can help to pinpoint deficiencies and focus change directly on alternative teaching and learning strategies. Focusing on expected program outcomes based upon input from employers and members of the profession has the potential for

Figure 3 Professional Preparation Outcomes



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helping faculty members keep programs responsive to the changing needs of the profession and society.

Contextual competence refers to an understanding of the broad social, economic and cultural setting in which the profession is practiced. The advent of managed care has stimulated awareness and discussion of the dynamic and interactive (reciprocal) relationship between nursing and society, creating a need for adaptive competence.

Adaptive competence refers to “the graduate’s ability to adjust to new conditions inherent in a rapidly changing technological society” and “implies a futuristic problem-solving orientation of graduates so that they anticipate and prepare for changes that might affect their work” (Stark, et al., 1986a, p.247). This is very important in health care, which is undergoing its most unprecedented change and foresees ongoing changes with continuing technological advancements, demographic changes, increasing chronic diseases and varying resource constraints.

As the health care delivery system is changing, and society is moving its focus from the individual to the team, from the individual to the family and the community, and from disciplinary to interdisciplinary study, interpersonal communication is ever more important. Interpersonal communication includes written, oral, and nonverbal communication and interpretation. In addition, it includes the ability to work with others. Central to effective interpersonal communication are collaboration, negotiation, and conflict management skills. All are necessary for interdisciplinary teamwork.

“The six facets of professional competence just described sharply differentiate spheres of behavior and knowledge that influence professional practice” (Stark, et al.,

1986a, p. 248). They serve as dimensions of behaviors to be included in any categorization of core competencies for a profession, and as such guided the research instrument modifications. The second category of professional preparation outcomes is professional attitudes. The subcategories of “professional identity” and “motivation for continued learning” are deserving of further discussion related to the proposed study. The changes in the financing and delivery of health care threaten the professional identity of nurses and nursing. As health care organizations, particularly hospitals, are restructuring and redesigning work to function more efficiently, and the setting for care delivery is shifting to non-institutional settings, the roles and responsibilities of nurses and other health care providers are changing. Entry-level nurses are likely to have aspects of their scope of practice assumed by less educated health care providers, such as licensed practical nurses and unlicensed assistive personnel. This substitution is based on overlapping competencies and the need to have care provided in the least costly settings by the most cost-effective providers.

Additionally, it is particularly important that nurses possess a motivation for continued learning. “The process of achieving professional competence is incomplete at the time an individual accepts an entry-level position” (Stark, et al., 1986a, p. 233), thus ongoing education is essential. Motivation for continued learning is characterized by acceptance of the need to update one’s knowledge and skills as the profession and the context in which it is practiced changes. Novice nurses must be motivated to learn and to promote continued competence.

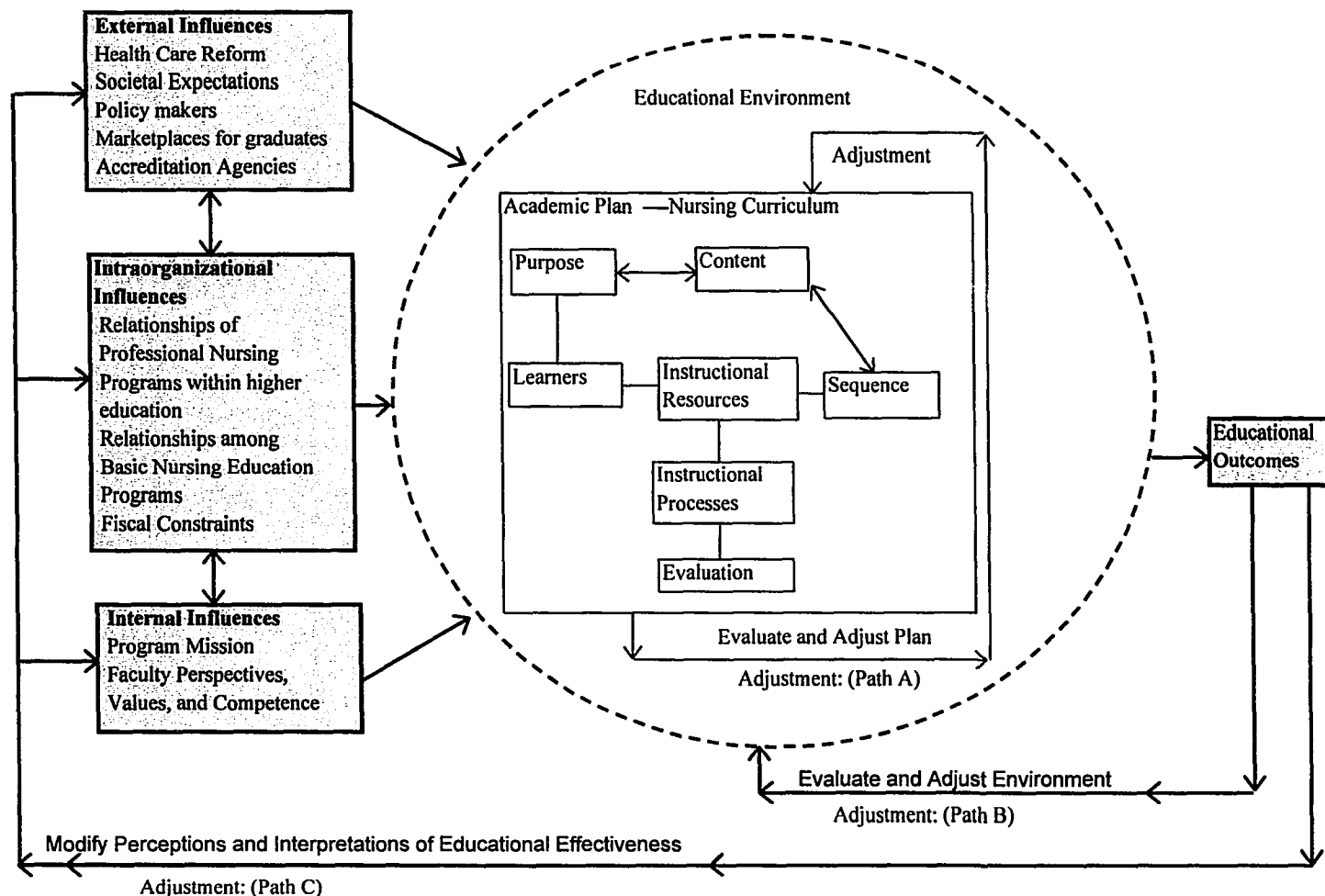
Although the literature speaks to preparation of nurses for the 21<sup>st</sup> century, nurses

need to be prepared in such a way and such a manner that the process is open, allowing continuous input and feedback into the educational processes with the output appropriate to same—not fixed at any moment in time, instead, always evolving. To demonstrate the dynamic and interactive processes of curricular change, Figure 4 is an adaptation of Stark and Lattuca's (1997), model of the "Academic Plans in Environmental Context," applied to nursing education. This adapted model provides a summary of the discussion of the conceptual framework and its relevance to nursing education. Using this model, nursing curricula (educational processes) are perceived as open systems, affected by and affecting external, organizational and internal forces, ultimately leading to changes in educational processes and outcomes. The model clearly illustrates the need to evaluate continuously both the input as well as the output and adjust the processes as necessary in order to achieve the desired outcomes--core competencies for entry into professional nursing.

#### Conceptual Framework Summary

The conceptual framework developed by Stark, et al. (1986a) and revised by Stark and Lattuca (1997) provides a basis for systematic analysis of pre-service professional programs. The constructs and linkages proposed in the framework contribute to an understanding of the adaptations professional education programs, in particular, nursing education programs, must make to the rapid changes brought about by external, intraorganizational, and internal forces. The framework was used in the systematic analysis of expected educational outcomes of entry-level nursing programs, the design of this research study and interpretation of study findings.

Figure 4 Outcomes Approach to Nursing Education



Note. Stark, J. & Lattuca, L. *Shaping the College Curriculum: Academic Plans in Action*. 1997. All rights reserved. Adapted by permission of Allyn & Bacon.



### Research Methods

The research methods for the conduct of this study were guided by the following research questions.

### Research Questions

1. How do the core competencies of graduates of basic nursing education programs as perceived by nursing staff differ from those perceived by nursing faculty?
2. How do the core competencies of graduates of basic nursing education programs as perceived by nursing staff differ from those perceived by nurse executives of health care agencies?
3. How do the core competencies of graduates of basic nursing education programs as perceived by nurse executives of health care agencies differ from those perceived by nursing faculty?
4. What are the core competencies graduates of basic nursing education programs need in order to practice across settings upon entry to practice?

### Research Design

A comparative descriptive research design was used to answer the study questions. This design allowed comparison of core competencies of the entry level RNs from the perspectives of nursing staff, nurse executives and nursing faculty. This design is congruent with the research questions and conceptual framework, permitting consideration of multiple perspectives affecting the educational processes associated with the basic educational preparation of nurses.

### Sample and Setting

The target population was all registered nurses (RNs) licensed in the state of Virginia, with an in-state mailing address. The purpose of limiting the population to RNs with a Virginia mailing address was to increase the possibility that the sample would include nurses actively practicing in Virginia. Many nurses are licensed in more than one state.

The desired sample for this study consisted of nurses from a variety of practice settings, faculty from entry-level nursing programs, and nurse executives from health care agencies. Because, increasingly more nurses will be practicing in community-based settings, it was important that nurses and employers from acute care settings as well as a variety of community-based settings participate in informing nursing faculty of the expected competencies of graduates. Generally, what faculty perceive as an essential outcome is likely to be emphasized in the curricula. Therefore, it was important to assess the faculty's perceptions of program outcomes, as evidenced in graduate competencies. Thus, with input from key stakeholders, the sampling frame was considered appropriate for determining the core competencies that registered nurses will need to possess upon entry to practice in order to function effectively in the evolving health care delivery system.

As previously noted, the goal was to survey nurses practicing in diverse work settings, faculty of associate degree, diploma and baccalaureate nursing programs, and nurse executives of health care agencies across Virginia. The Board of Nursing (BON) mailing list of all persons licensed in Virginia as a registered nurse, with an in-state

mailing address was purchased from the Virginia Department of Health Professions. It was anticipated that a few nurses who live in adjacent states and are working in Virginia would be excluded; however the purpose of this exclusion was to ensure that the nurses surveyed were more likely to be actively practicing in Virginia.

Systematic stratified sampling was used to increase the probability of representativeness. The sampling methodology was a deliberate attempt to ensure that the sample sizes for faculty and nurse executives were adequate. It was anticipated that a simple random sample from the BON listing would not recruit an adequate number of faculty and nurse executives.

A convenience sample of nurse executives was selected based upon a membership listing of the Virginia Organization of Nurse Executives (VONE). VONE is an organization for the voluntary membership of nurses in middle and upper level nursing management positions, e.g., nurse managers, supervisors, vice presidents and nurse executives, who are usually responsible for hiring, staffing and firing decisions. All members were asked to participate ( $n = 119$ ). It was anticipated that other nurse executives would be asked to participate when randomly selecting nurses from the BON mailing list. These nurse executives ( $n = 63$ ) were added to the VONE group when conducting data analyses.

The survey was mailed to a convenience sample of faculty based upon the availability of information about the faculty. A variety of methods were used to obtain a listing of the faculty. The preferred distribution method was direct mailing of the surveys to the homes of nursing faculty. When available, published listings of faculties were

used. If faculty lists were not found, the Directors or Deans of schools of nursing were contacted and a listing of the faculty was requested. If a listing was not provided by the Directors or Deans, assistance was requested for the distribution of the instrument. Survey packets with contents identical to those mailed directly to faculty were sent to the Dean/Director for distribution. Stamped, self-addressed envelopes were enclosed so that the faculty could return the survey directly to me.

Prior to randomly selecting nursing staff (nurses who provide direct care to patients in hospitals, nursing homes, home health agencies, and other community-based settings) from the Board of Nursing mailing list of approximately 65,000 registered nurses, VONE members and identified nursing faculty were excluded. Using a systematic sampling process for inclusion of every 68<sup>th</sup> name, 1052 nurses were selected for the nursing staff population. The target sample size of nursing staff, nurse executives and nursing faculty was approximately 450. This number was based upon Cohen's (1987) table for estimating sample size based upon population in order to ensure representativeness.

#### Data Collection Instrument

The two-part data collection instrument used in this study is a modification of the questionnaire used by the American Nurses' Association (1996) to identify the skill sets that nurses will need in order to remain in acute care or to make the transition to one of three community-based settings (See Appendix A). The instrument was chosen because of the degree of input from the nursing community into its development and the scope of perspective--acute care ( $n = 47$  hospitals), long term care ( $n = 46$  nursing homes), and

community-based care ( $n = 46$  home care agencies and  $n = 46$  health maintenance organizations). Nurse executives from the larger institutions within every geographic region of the country were participants.

Part I of the two-part instrument consists of competency statements. A careful review of the literature was conducted to assess the relevance and comprehensiveness of the competency statements on the original tool (ANA, 1996) when compared to those identified by a number of specialty nursing organizations (AACN, 1997; AACN & ANA 1997) and others within the nursing community (NLN, 1998; PEW, 1995a). Pilot testing of the instrument occurred prior to and after modification of the instrument. Nurses representing the three key positions and practice settings participated in the pilot testing. Six competency statements were added to the 19 items on the original instrument based upon the literature review, pilot testing and an evaluation by a panel of nurses. These competencies were repeatedly identified in the literature as expected competencies required for effective practice in the evolving health care delivery system, particularly across settings (see Table 7). Content validity is based upon the literature review, prior related research and evaluation by a team of nurses.

Competency statement #16 "Knowledge and skills related to information management and patient care technologies" was split into two statements after it was reviewed by two staff educators who are responsible for orienting and educating new graduates, upon hire to an acute care facility. They agreed that the statement included two very different, complex functions and should be divided as such. On the instrument as used in this study, the competency statement was split into the following two

Table 7

Rationale for and Sources of Competency Statements

Competency Statement Added	Rationale/Source
1. Ability to function as a member of an interdisciplinary team	Nurses must be prepared to function as both a leader and a member of an interdisciplinary team. Pew, 1995b; Ark & Nies, 1996; AACN & ANA, 1997; AONE, 1996; VHA, 1992
2. Ability to document interventions and outcomes	Reimbursement and outcomes evaluation are highly dependent upon accurate documentation--a primary mode of communication among the health care team. NLN, 1997; Ark & Nies, 1996; AACN, 1998; Taligareni & Marckx, 1997;
3. Critical Thinking/Problem Solving Ability Decision making	Literature is replete with need for greater critical thinking, problem solving and decision making skills. AACN, 1997; AACN & ANA 1997; AONE, 1996, 1998; Ark & Nies, 1996; VHA, 1992; Chalmers, et al., 1998
4. Ability to apply ethical principles and professional standards in decision making	Demands for greater accountability and an increased focus on patients' rights have increased the need for application of ethical principles and professional standards in decision making. AACN, 1997; AACN & ANA, 1997; ANA, 1995a; NLN, 1997;
5. Knowledge and skills related to information management	This is the information age, characterized by knowledge explosion and computerization, resulting in a need to effectively manage information, privacy and confidentiality issues; AACN, 1998; AACN & ANA, 1997; NLN, 1997; Bellack, 1998;
6. Knowledge of and ability to utilize patient care technologies	Introduction of new technologies are affecting the degree of competency of the nurse. Ark & Nies, 1996; AACN, 1997; AACN & ANA, 1997; AONE, 1996; Bellack, 1998; NLN, 1997

statements: #16 “Knowledge and skills related to information management” and #17 “Knowledge of and ability to use various patient care technologies.”

After adding the six competency statements, some structural changes were made to the instrument. When the tool was initially tested with a group of nurses, it consisted of a mere listing of the 19 competency statements without any categorization. Based upon comments by this focus group, the outcome criteria established by the NLN (1982, 1989, 1992) for each of the basic nursing education programs and AACN’s Essentials for Baccalaureate Nursing Education (1998), the 25 competency statements were categorized in the following five domains (scales) according to common themes or constructs:

1) Interpersonal Relationships/Communication Skills; 2) Critical thinking/ Problem Solving/Decision Making Skills; 3) Management and Care Coordination Skills; 4) Direct Care/Technical Skills and 5) Self Management Skills. An exploratory factor analysis, conducted to determine the internal consistency of the instrument, resulted in a six factor solution, accounting for 61% of the variance. Using Cronbach’s alpha to determine internal consistency reliability estimates, four of the six scales had acceptable alphas, ranging from .76 to .84. The other two scales had alphas of .59 and .50. These two scales have three or less factors in them, contributing to the marginal stability of the reliability estimates, and will be discussed further in Chapter 5.

On a machine scannable form, participants were asked to use a five factor Likert-type scale to rate the importance of each of the competencies from (1) “unimportant” to (5) “essential.” Additionally, using an open-ended question, respondents were asked to indicate any competency that was not listed but “essential” that a new graduate possess.

Respondents were provided space to write in a maximum of two competencies. This information was used to assess the completeness of the identified listing of core competencies required of beginning nurses. The competencies were typed exactly as written by respondents and then categorized based upon content review and basic themes. A panel of experts (see Appendix H), including a nurse executive, nursing faculty member, and three nursing staff (an inservice educator, a clinical nurse specialist and a staff nurse) reviewed the competency statements and categories for appropriateness. The panel were told that they could rename a category, recommend deletion or addition of a category, or move competency statements to different categories. Additionally “comments” rather than “competency statements” were to be identified and placed with the “Additional Comments.”

Part II of the instrument requested demographic data about the subjects. All participants were asked about their position, place of employment, level of education, years of nursing experience and number of years in current place of employment. In addition, nurse executives were asked to describe hiring policies and practices related to new graduates. Nursing faculty, on the other hand, were asked to describe the type of nursing education program in which they worked and teaching responsibilities, classroom and clinical supervision.

#### Data Collection

A two-phase mailing process was used to collect data. The first mailing consisted of a cover letter, a two-part questionnaire, and a stamped, self-addressed envelope for return of the completed questionnaire. These materials were sent via first class mail to



ensure prompt delivery and return. A cover letter (see Appendix B) was used to explain the purpose and methods of the study as well as acknowledge the subjects' rights as research subjects. There was no person-identifiable information on the survey. Return of the questionnaires represented subjects' voluntary consent to participate. The questionnaire was color coded according to sample groupings to aid in data management (see Appendix A). An identification number was imprinted on each form. This identification number was entered into the database of potential participants' names and addresses, allowing data management and follow-up correspondences. Subjects were advised in the cover letter of the purposes of the identification number. Self-addressed, stamped envelopes were provided so that nurses would return the survey directly to the investigator. Following the first mailing, when the post office provided corrected addresses, the survey packets were sent to the "new" address. This step was taken in an attempt to increase the potential pool of participants. Approximately 500 participants had returned the survey within three weeks after the initial mailing. Reminder postcards (see Appendix C) were mailed to all potential subjects who had not returned the questionnaire ( $n = 1000$ ). The postcard was used to emphasize the importance of the study and to request participation.

### Confidentiality

All potential participants were promised confidentiality for their participation in the study. Pre-assigned code numbers were used to facilitate cost-effective follow-up mailings. The files containing the names and addresses of potential participants and were kept separate from the data files. The data files of scannable information was exported

directly into an SPSS file. The non-scannable information was typed, without person-identifiable data, by a paid typist.

### Response Rates

In the manner described above, materials were sent to 1570 nurses. Of these, 40 were undeliverable due to invalid addresses. An additional 12 were returned because the nurses were retired, unemployed or otherwise not working in nursing. Therefore, the adjusted sample size was 1518. The instrument was returned by 709 individuals, representing an overall response rate of 46.7%.

Because the response rate was less than 70%, a follow-up survey (see Appendix D), using a written survey and telephone interviews, was conducted to determine the reason for non-participation and compare the demographics of non-respondents with respondents. The telephone numbers of 50 individuals, selected at random from among non-respondents, were obtained from the local telephone directory or Internet directory. Telephone calls were made on weekends and evenings in late December 1998 and early January 1999, in an attempt to reach the greatest number of individuals. A structured interview was conducted, using the same script as the mailed follow-up survey. The telephone response was very poor. The interviewers were able to make telephone contact with only 10% of the identified sample.

A written follow-up survey (see Appendix D) was mailed via first class mail with an enclosed self-addressed, stamped envelope to 45 individuals, selected randomly from the non-respondents among the three study groups. It was decided mailed surveys, with no identifiers (code numbers) would generate better responses than telephone interviews

and would be less expensive than multiple long distance calls across the state. Thirty-five individuals (78% response rate) returned the mailed follow-up survey. Thus, a total of 40 persons responded to the follow-up survey of non-respondents.

### Data Analysis

Prior to data analysis, the data were screened and verified to minimize ambiguous responses or to manually enter data that were not captured electronically. Data files were established for nurse executives, nursing faculty and nursing staff.

Descriptive statistics were used to analyze demographic data. Demographic data were compared with state and national data in order to assess representativeness of the sample. Additionally, demographic data were used to compare non-respondents with respondents. Four variables were compared: position, highest level of nursing education, years of nursing experience, and work place. A Chi Square Test was used to determine whether there was any statistically significant differences between the two groups.

Inferential and descriptive statistics were used to analyze the ratings of the competency statements. The data analysis procedures are presented according to the order of the research questions. The same data analysis procedures were used for Questions One, Two and Three and, therefore, will be described together followed by the data analysis procedures for Question Four.

Research Question One. How do the core competencies of graduates of basic nursing education programs as perceived by nursing staff differ from those perceived by nursing faculty?

Research Question Two. How do the core competencies of graduates of basic nursing education programs as perceived by nursing staff differ from those perceived by nurse executives of health care agencies?

Research Question Three. How do the core competencies of graduates of basic nursing education programs as perceived by nurse executives of health care agencies differ from those perceived by nursing faculty?

Using SPSS/PC, scale means were computed for each of the scales generated by the factor analysis. A Repeated Measures, Analysis of Variance (ANOVA) was used to test for differences between scale means. Then a one-way ANOVA was conducted to determine the differences between group means for the six scales. The independent variable was "position" and the dependent variables were the scales. Because "position" included three groups--nursing staff, nurse executives and nursing faculty--when there was a statistically significant difference between the groups ( $p < .05$ ). Post hoc analyses, using Tukey's HSD, were conducted to determine where the "between groups" differences actually were. Core competencies were defined as those competencies rated "very important" or "essential" ( $M \geq 4.0$ ) by 70% of respondents.

The component competencies (individual competency statements) were then analyzed. Means were calculated for each competency by position. After which, the competencies were ranked in descending order, according to group means. Crosstabs were used to determine the percent of each group that rated the competencies "very important" or "essential." All means of 4.0 or higher were counted. Chi Square Tests were used to determine if differences between groups were significant. Core

competencies were defined as previously described.

Research Question Four. What are the core competencies graduates of basic nursing education programs need in order to practice across settings upon entry to practice?

Using SPSS/PC, scale means were computed. The relative importance of the competencies for entry level registered nurses (scale means) were rank ordered and compared. Additionally, frequencies were calculated. Analyzes of variance and Tukey's HSD were used to test for differences in group means for each of the six scales. The independent variable was "workplace" and the dependent variables were the scales. For the purpose of this analysis, a core competency was defined as one for which the scale mean was 4.0 or higher and for which there were no statistically significant differences across work settings.

To more closely analyze the component competencies within each scale, the means for each of the competency statements were examined and measured against the following criterion for a core competency: "one perceived 'very important' or 'essential' ( $M \geq 4$ ) by 70% of the total group and for which there were no statistically significant differences across work settings." Chi Square Tests were used to determine if differences between groups were significant.

### Summary

The research methodology for the investigation was presented in this chapter. Guiding the research methods is the conceptual framework for professional preparation programs developed by Stark et al. (1986) and modified by Stark and Lattuca (1997). A

comparative descriptive research design was used to describe the core competencies required of nursing graduates upon entry to practice. These competencies represent the expected educational outcomes from the perspectives of nurses employed in diverse settings, nurse executives and nursing faculty. Using Stark's model, the expected educational outcomes are associated with the interaction of external, intraorganizational and internal forces affecting nursing education. An investigator-modified questionnaire was used for data collection. Inferential and descriptive statistics were used to analyze the data.

The results will be discussed in Chapter 4. In Chapter 5, a discussion of the findings, conclusions and implications for nursing education, practice and research are presented.

## Chapter 4

### Results

#### Introduction

This study was designed to describe the core competencies graduates of basic nursing education programs will need upon entry to practice. These competencies should enable the graduate to function as a beginning practitioner in diverse care delivery settings. The study findings are presented in this chapter. Following a description of the demographic characteristics of study participants and non-respondents, the findings are presented in order of the research questions. The statistical tests used to analyze the data are described also. The level of significance used for statistical tests was an alpha of .05.

#### Demographic Characteristics

The demographic characteristics of study participants are described in Table 8. Of the 682 respondents who classified themselves, 282 (41.8%) were nursing staff, 117 (17.2%) were nurse executives and 216 (30.2%) were nursing faculty. Additionally, 67 persons classified themselves as “other,” of which 33 were retired and 23 were unemployed. Survey packets were sent to 119 persons identified as members of the Virginia Organization of Nurse Executives (VONE). Of the 67 members of VONE who responded, (response rate of 56.3 %), 54 respondents classified themselves as nurse executives. Sixty-three additional nurse executive respondents were randomly selected

Table 8

Demographic Characteristics of Participants Classified as Nursing Staff, Nurse Executives and Nursing Faculty

Demographic Characteristics	Nursing Staff		Nurse Executives		Nursing Faculty		Total	
	N	%	N	%	N	%	N	%
<b>Position</b>	282	46.0%	117	19.1%	214	34.9	613	100%
<b>Highest Level of Education</b>								
Associate Degree	59	21.0%	12	10.3%		0.0%	71	11.6%
Diploma	57	20.3	19	16.2	3	1.4	79	12.9%
Bachelor's Degree	122	43.4	28	23.9	18	8.4	168	27.4%
Graduate Degree (Master's or Doctorate)	43	15.3	58	49.6	194	90.2	295	48.1%
Total	281	100%	117	100%	215	100%	613	100%
<b>Years of Nursing Experience</b>								
Less than 10 Years	83	29.6%	7	6.0%	6	2.8%	96	15.7%
10 - 19 Years	92	32.9	26	22.2	40	18.7	158	25.9%
20 Years and More	105	37.5	84	71.8	168	78.5	357	58.4%
Total	280	100%	117	100%	214	100%	611	100%



Table 8 contd.

Demographic Characteristics	Nursing Staff		Nurse Executives		Nursing Faculty		Total	
	N	%	N	%	N	%	N	%
<b>Workplace</b>								
Acute Care Hospital	187	67.0%	65	58.0%	3	1.4%	255	42.6%
Long Term Care Facility	13	4.7	21	18.8	1	0.5	35	5.8
Community-based Setting	78	28.0	23	20.5	7	3.4	108	18.0
School of Nursing	1	0.4	3	2.7	197	94.7	201	33.6
Total	279	100%	112	100%	208	100%	599	100%
<b>Type of Nursing Program Faculty Employed Within</b>								
Associate Degree Program					57	25.4%	57	25.4%
Baccalaureate Degree					80	35.7	80	35.7
Diploma					51	22.8	51	22.8
Graduate Program					36	16.1	36	16.1
Total					224	100%	224	100%

Note. Sample:  $N = 709$ ; Numbers vary among characteristics based on self-report. Data on persons classified as “other” not presented. “Other” refers to those unemployed, retired or not working in nursing ( $n = 69$ , 10.1%). Missing data are excluded: Position:  $n = 27$  (3.8%); Education:  $n = 14$  (2%); Workplace:  $n = 65$  (9.6%); Years of Nursing Experience:  $n = 17$  (2.4%).

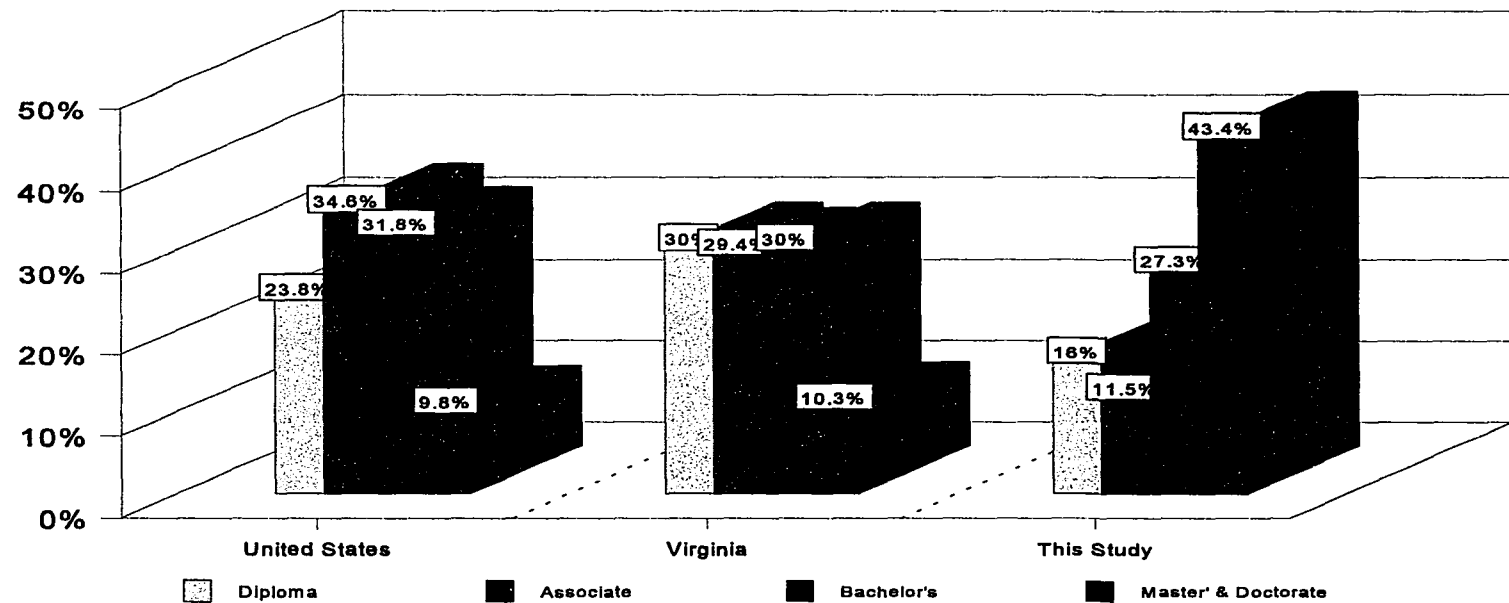
from the Virginia Board of Nursing mailing list. The response rate from faculty, based upon the faculty listing was 62.2%. This is a high response rate for faculty, especially given the fact that the survey was distributed towards the end of a semester. The response rate for the faculty whose survey was sent to the Director for distribution (68%) was approximately the same as for those for whom the surveys were mailed directly to their homes. On the survey instrument, graduate faculty were expected to classify themselves as “other” and then specify “graduate faculty.” A majority of graduate faculty indicated that they also teach in the undergraduate program. Therefore, prior to data analyses, all graduate faculty were grouped with “nursing faculty.” As a result, the “other” category did not include nurses actively involved in nursing education or nursing practice.

The highest education earned by the sample, according to position, was very predictable. The majority of nursing staff (84.7%) had a bachelor’s degree or less as their highest education level. In contrast, but as expected, the majority of nursing faculty (90.2%) had a master’s degree or doctorate. Slightly more than half of nurse executives had earned a graduate degree.

The sample was more highly educated than the general population of registered nurses in the United States and Virginia (see Figure 5). More than 43% of the sample had a master’s or doctorate versus 9.8% for the U.S. and 10.3% for Virginia. One possible explanation for the disproportionate number of highly educated nurses is the large number of nurse executives and nursing faculty. The NLN mandates that the majority of faculty of NLN accredited nursing programs (all programs in Virginia) possess a Master’s Degree. Additionally, the state board of nursing requires that faculty are educated at least

Figure 5

Comparison of Highest Education of Sample with National Sample Survey Data



Note. Percents for the United States ( $N = 2,558,874$ ) and Virginia ( $N = 66,436$ ) are based on findings from the National Sample Survey for Registered Nurses, March 1996 (Moses, 1997). Study sample size ( $N = 709$ ), excludes missing data.

one degree higher than the students they are educating. Therefore, most faculty have at least a Master's Degree. The advances in health care delivery and demands for nursing managers with different skills is a possible reason for the large number of nurse executives with a graduate degree.

The majority of respondents (58.4%) have 20 years or more of nursing experience. Nursing staff, as might be expected, were spread more evenly across the experience ranges. Greater than 70% of both nursing faculty and nurse executives had more than twenty years of nursing experience. Consistent with the findings of Braham & Ward (1993), the majority of respondents were employed in nursing for more than 10 years. This combination of higher education and greater experience may account for some of the differences in perceptions of the importance of particular competencies.

The workplace of participants was somewhat skewed due to the deliberate attempt to include an adequate number of nursing faculty and nurse executives. Of the sample (excluding "other"), 33.6% were from "schools of nursing;" 42.6% represented acute care; 5.8% were from long term care facilities; and 18.0% represented community-based settings. There are 36 schools of nursing in Virginia, 12 baccalaureate degree, 17 associate degree and seven diploma programs. Faculty participants were representative of all three types of basic nursing programs as well as graduate programs ( see Table 8). The survey item for workplace did not include a choice for "other" or "not applicable." This may have contributed to the exceptionally large percentage (9% versus 2 - 4%) of missing data associated with this item. Retirees accounted for almost 50% of missing data associated with place of work. Approximately 16 % of the sample indicated that

their position was “other,” meaning that they were retired, unemployed, or not employed in nursing. In the National Sample Survey of Registered Nurses, March 1996, approximately 21% of registered nurses in Virginia are not employed in nursing.

### Non-respondents

Of the 40 non-respondents who participated in the follow-up survey or interview to determine why they did not participate in the study, the reason cited most frequently ( $n = 16$ , 40%) was “I did not feel that I was the best (most appropriate) person to complete the survey.” Additionally, six persons who indicated “other” and wrote in a reason were either retired, unemployed, or not employed in nursing, and therefore may have concluded that they too were not the most appropriate persons to complete the survey. Approximately one third of non-respondents indicated that they either 1) misplaced or lost the survey ( $n = 8$ , 20 %) or 2) did not receive the letter and survey ( $n = 5$ , 12.5%). Only 10 % ( $n = 4$ ) selected the option, “chose not to participate.”

A comparison of demographic characteristics of non-respondents with respondents was conducted to determine whether there was any selection bias associated with the sampling methodology (see Table 9). This was necessary since the response rate to the survey was less than 70%. The demographic variables compared included: “current position,” “highest level of education,” “current workplace” and “years of nursing experience.” A Chi Square Test was used to determine whether there was a statistically significant difference between the groups. For three of the four variables, there were no significant differences between respondents and non-respondents.

Table 9

Comparison of Demographic Characteristics of Respondents and Non-Respondents

Demographic Characteristic	Respondents		Non-Respondents	
	N	%	N	%
<b>Current Position*</b>				
Staff	282	41.3%	10	26.3%
Executive	117	17.2%	5	13.2%
Faculty	216	31.7%	8	21.1%
Other	67	9.8%	15 <sup>a</sup>	39.5%
Total	682		38	
<b>Education</b>				
Associate Degree	80	11.5%	3	7.7%
Diploma	111	16.0%	10	25.6%
Bachelor's Degree	190	27.3%	12	30.8%
Graduate Degree	314	45.2%	14	35.9%
Total	695		39	
<b>Workplace</b>				
Acute Care Hospital	269	42.0%	11	44.0%
Long Term Care Facility	41	6.0%	0	0.0%
Community-based Setting	126	19.7%	7	28.0%
School of Nursing	205	32.0%	7	28.0%
Total	641		25 <sup>b</sup>	
<b>Years of Nursing Experience</b>				
Less than 10 Years	108	15.6%	4	10.5%
10 - 19 Years	175	25.3%	9	23.7%
20 Years or more	409	59.1%	25	65.8%
Total	692		38	

Note. An "N < 709" for respondents or an "n < 40" for non-respondents represents missing data.

<sup>a</sup> Retired and unemployed nurses (n=15); <sup>b</sup> Retired or unemployed nurses excluded; \*p < .05

There was a statistically significant difference,  $\chi^2 (3, n = 4) = 31.434, p \leq .000$ , between respondents and non-respondents for the variable “position.” Approximately 10% of respondents were classified as “other” compared with 40% of non-respondents. As previously mentioned, the category “other” was used for unemployed and/or retired nurses, who are unlikely to have a workplace. It is justifiable, therefore, that among the non-respondents there was an unusually large number of persons in the “other” category. A group of non-respondents not included in the follow-up survey were nurses who returned the research study packet when first mailed, indicating that they were retired, unemployed or not employed in nursing and, therefore, chose not to participate in the study. The investigator asserts, therefore, that the non-respondents and the respondents represent the same population and the study is not adversely biased by selection methods (For details, see Table 9).

#### The Instrument: Factor Analysis

As previously described, 19 competencies were listed on the original instrument (ANA, 1996). Six competency statements/constructs were added by the investigator. Four of these six competency statements/constructs were rated “very important” (group means ranged from 4.34 - 4.55). The four competency statements are: 1) Ability to function as a member of an interdisciplinary team ( $m = 4.37$ ); 2) Ability to document interventions and outcomes ( $m = 4.50$ ); 3) Critical Thinking/Problem Solving Ability/Decision Making ( $m = 4.55$ ); and 4) Ability to apply ethical principles and professional standards in decision making ( $m = 4.34$ ). Based upon the importance attributed to these competencies by study respondents, support is provided for the

acceptance of these competencies as essential for new graduates. On the other hand, Knowledge and skills related to information management and Knowledge of and ability to utilize patient care technologies were rated “important,” group means of 3.51 and 3.73 respectively.

The 25 competency statements on the instrument were categorized in five constructs: Management and Care Coordination Skills; Critical Thinking/Problem Solving; Self Management Skills; Direct Care Skills/Technical Skills; and Interpersonal/Communication Skills (see Appendix A). Based upon participants’ responses, item and group means were calculated for each of the 25 competency statements. A ranking of the item means are presented in Table 10. The means ranged from 3.28- 4.62 on a scale from “1 to 5,” with three representing “important” and a five representing “essential.” Physical Assessment Skills was ranked highest by all respondents as a group ( $M = 4.62$ ,  $SD = .61$ ), and highest by nursing staff and nurse executives. Documentation ( $M = 4.70$ ,  $SD = .55$ ), followed closely by Critical Thinking/Problem Solving, was ranked highest by nursing faculty. Knowledge of Community Resources was ranked lowest by all respondents as a group ( $M = 3.45$ ,  $SD = .93$ ), as well as lowest by nursing staff and nursing executives. Nursing faculty ranked “Ability to Coordinate Other Service Providers” lowest ( $M = 3.51$ ,  $SD = .88$ ).

Using the 25 competency statements as individual factors, an exploratory factor analysis was conducted to determine how the various factors would load. The resulting six factor solution accounted for 61% of the variance. All 25 competency statements loaded under a construct as illustrated in Table 11. The factor loading deviated



Table 10

**Ranking of Competency Statements by Total Group Means: Group Means by Position.**

Competency Statement	Total Group Mean (all respondents)	Group Mean		
		Nursing Staff	Nursing Faculty	Nurse Executive
Physical Assessment	4.62 (.61)	4.63 (.62)	4.59 (.63)	4.57 (.61)
Critical Thinking	4.55 (.66)	4.49 (.72)	4.68 (.57)	4.52 (.66)
Documentation	4.50 (.71)	4.38 (.79)	4.70 (.55)	4.53 (.65)
Flexibility	4.47 (.67)	4.51 (.65)	4.50 (.68)	4.41 (.67)
Communicate with Physician	4.42 (.74)	4.43 (.74)	4.38 (.73)	4.38 (.81)
Team member	4.37 (.76)	4.35 (.80)	4.47(.70)	4.30 (.71)
Patient & Family Teaching	4.35 (.76)	4.23 (.79)	4.60 (.63)	4.22 (.79)
Ethics	4.34 (.77)	4.20 (.83)	4.56 (.66)	4.24 (.75)
Analytic skills	4.25 (.80)	4.08 (.82)	4.56 (.67)	4.20 (.81)
Technical skills	4.22 (.85)	4.36 (.87)	4.04 (.81)	4.20 (.83)
Relationship	4.19 (.84)	4.05 (.87)	4.39 (.80)	4.15 (.80)
Initiative	4.18 (.78)	4.16 (.80)	4.20 (.75)	4.19 (.78)
Sensitivity to Diversity	4.09 (.79)	4.00 (.84)	4.27 (.76)	3.97 (.73)
Patient conditions	4.07 (.84)	4.16 (.84)	4.02 (.87)	3.97 (.87)
Psychosocial Assessment	4.05 (.89)	3.88 (.94)	4.31 (.80)	4.08 (.83)
Function autonomously	4.02 (.88)	4.10 (.92)	3.92 (.88)	4.07 (.83)
Independence	3.96 (.89)	4.00 (.89)	3.90 (.92)	3.90 (.84)
Manage Nursing Assistants	3.81 (.94)	3.70 (.98)	3.94 (.87)	3.79 (.99)
Patient Care Technologies	3.73 (.82)	3.74 (.84)	3.71 (.80)	3.67 (.81)
RN Does Not Control Patient Setting	3.66 (1.04)	3.70 (1.00)	3.61 (1.12)	3.64 (1.09)
Complement physicians	3.62 (.90)	3.59 (.92)	3.54 (.88)	3.68 (.87)
Case management	3.53 (.92)	3.45 (.96)	3.64 (.90)	3.54 (.87)
Information management	3.51 (.82)	3.47 (.81)	3.57 (.88)	3.46 (.76)
Coordinate services	3.48 (.93)	3.45 (.94)	3.51 (.87)	3.50 (.98)
Community resources	3.44 (.93)	3.33 (.95)	3.70 (.92)	3.28 (.83)

Note. Standard deviations are in parentheses.

somewhat from the categorization on the survey instrument and will be explained with the description of the scales. Labels were assigned to each scale based upon terms commonly encountered in the nursing literature for the identified competencies, and as named on the instrument, with the exception of “Psychosocial Skills” which was added when a six factor solution resulted. Cronbach’s Alpha was used to assess internal consistency. The internal consistency of the 25 item instrument was .83. The reliability alpha for the scales are as follows: Management and Care Coordination Skills (.84); Critical Thinking/Problem Solving (.80); Self Management Skills (.78); Direct Care Skills/Technical Skills (.76); Psychosocial Skills (.59); and Interpersonal/Communication Skills (.50).

Factor One, Management and Care Coordination Skills, consists of six competencies: 1) Ability to complement physicians to maximize physicians’ and nurses’ productivity; 2) Case management skills: the ability to intervene across the continuum of care; ability to consider and act upon the cost effects of decisions regarding care; 3) Ability to manage nurse assistants and unlicensed assistive personnel; 4) Ability to coordinate other service providers, such as social workers, physical therapists, dieticians, etc.; 5) Knowledge of community resources; and 6) Knowledge and skills related to information management. Knowledge and skills related to information management is the competency statement that shifted to this category from Direct Care/Technical Skills during the factor analysis. Factor One had the lowest scale mean (3.57, SD = .68). The competencies included in this factor focus on interdisciplinary teams and community-based interventions.

Table 11 Summary of Factor Analysis (Principal Component Analysis)

Competency Scales		Factor Loadings					
		1	2	3	4	5	6
<b>Management &amp; Care Coordination Skills</b>							
Complement physicians	.571						
Case management Skills	.717						
Manage NAs and UAP	.652						
Coordinate services	.755						
Community resources	.646						
Information management	.516						
<b>Critical Thinking/Problem Solving</b>							
Patient & Family Teaching		.509					
Documentation Skills		.532					
Critical thinking Skills		.776					
Analytic Skills		.755					
Ethics and Prof. Standards		.625					
<b>Self Management Skills</b>							
Function autonomously			.602				
Initiative			.671				
Independence			.734				
Flexibility			.685				
RN does not control pt setting			.631				
<b>Direct Care Skills/Technical Skills</b>							
Variety of Patient Conditions				.666			
Patient Care Technologies				.640			
Physical Assessment				.697			
Technical Skills				.745			
<b>Psychosocial Skills</b>							
Psychosocial assessment					.678		
Sensitivity to Diversity					.587		
Relationship Skills					.556		
<b>Interpersonal/Communication Skills</b>							
Communicate with physicians							.769
Interdisciplinary Teammember							.533
		1	2	3	4	5	6
Mean=	3.57	4.40	4.05	4.16	4.11	4.39	
Alpha =	.84	.80	.78	.76	.59	.50	

Factor Two, Critical Thinking/Problem Solving, includes five competencies:

1) Ability to teach and counsel patients and their families; 2) Ability to document interventions and outcomes; 3) Critical thinking: ability to problem solve and apply knowledge to diverse situations; 4) Analytic skills: ability to gather and interpret data about patients, families and communities; and 5) Ability to apply ethical principles and professional standards in decision making. This factor had the highest scale mean (4.40,  $SD = .55$ ). “Ability to teach and counsel patients and their families” and “Ability to document interventions and outcomes” shifted from Interpersonal/Communication Skills to this factor. All of the competencies included in this factor requires the application of knowledge and reflective practice. The two competencies that were added are, therefore, logical additions.

Factor Three, Self Management Skills, includes five competencies: 1) Ability to function autonomously in the absence of a physician; 2) Initiative: self starting and self-motivated, as in setting own schedules; 3) Independence: the ability to work without readily available support; 4) Flexibility: the ability to adjust to unforeseen changes in patient’s condition; and 5) Recognition and acceptance that the nurse does not control the patient setting. The scale mean for this factor is second lowest (4.06,  $SD = .62$ ). The competencies included in this factor are highly cognitive and generally characterize an experienced nurse. Additionally, all of the components in this scale were grouped together on the instrument under the construct Self Management Skills and thus were confirmed by the factor analysis process.

Factor Four, Direct Care Skills/Technical Skills, includes four competencies:

1) Experience with a wide range of patient conditions; Proficient clinical nursing knowledge and skills; 2) Knowledge of and ability to use various patient care technologies; 3) Ability to conduct physical assessments of patients; and 4) Technical skills, such as proficiency in handling IVs, venipuncture skills, medication administration, special treatment and procedures. The scale mean was 4.17( $SD = .60$ ). This factor was more concerned with the psychomotor skills or domain-specific skills usually performed by the registered nurse. All four of the components were previously listed under this factor under this label or as part of this construct.

Factor Five, Psychosocial Skills, includes three competencies: 1) Ability to conduct psychosocial assessments of patients, families and communities; 2) Sensitivity to the needs and situations of diverse patient groups, i.e., elderly, ethnic groups, children; and 3) Ability to build a continuing relationship with patients and their families. The scale mean was 4.11( $SD = .62$ ), a rating of “very important.” This factor was created by competencies from two other factors. Additionally, one of the competencies had a significant secondary factor loading. All of the components relate well to the use of psychosocial skills.

Factor Six, Interpersonal/Communication Skills, includes only two competencies:

1) Ability to communicate with physicians and 2) Ability to function as a member of an interdisciplinary team. This factor had the second highest scale mean (4.39,  $SD = .61$ ), a strong rating of “very important.” The original factor Interpersonal/Communication Skills was disrupted by competencies loading on three factors. The small number of

competencies that loaded on this factor will be discussed further.

Using SPSS/PC, scale means were computed for each of the scales generated by the factor analysis. A Repeated Measures, Analysis of Variance (ANOVA) was used to test for differences between scale means (see Table 12). The factors were not equal. A statistically significant difference existed between each factor and three or more other factors. The mean for Factor One, Management and Care Coordination Skills was significantly lower than all other scale means.

The independent variables were “position” and “workplace.” The dependent variables were the scales or factor means and the 25 individual competency statements. Because the independent variables included three or more groups, when a statistically significant difference between the groups ( $p < .05$ ) was identified via ANOVAs, post hoc analyses were conducted. Tukey’s HSD was used to determine where the “between groups” differences actually were.

#### Research Questions: The Findings

The research questions in this study sought answers to two major questions: Is there consensus among nursing staff, nurse executives and nursing faculty regarding the core competencies graduates of basic nursing programs should possess in order to function across settings upon entry to practice? and What are the core competencies graduates of basic nursing programs should possess in order to function across settings upon entry to practice? In order to answer these questions four specific research questions were posed. The research results associated with Questions One, Two and Three will be presented together, followed by the results associated with Question Four.

Table 12

Repeated Measures, ANOVA of Scale Means

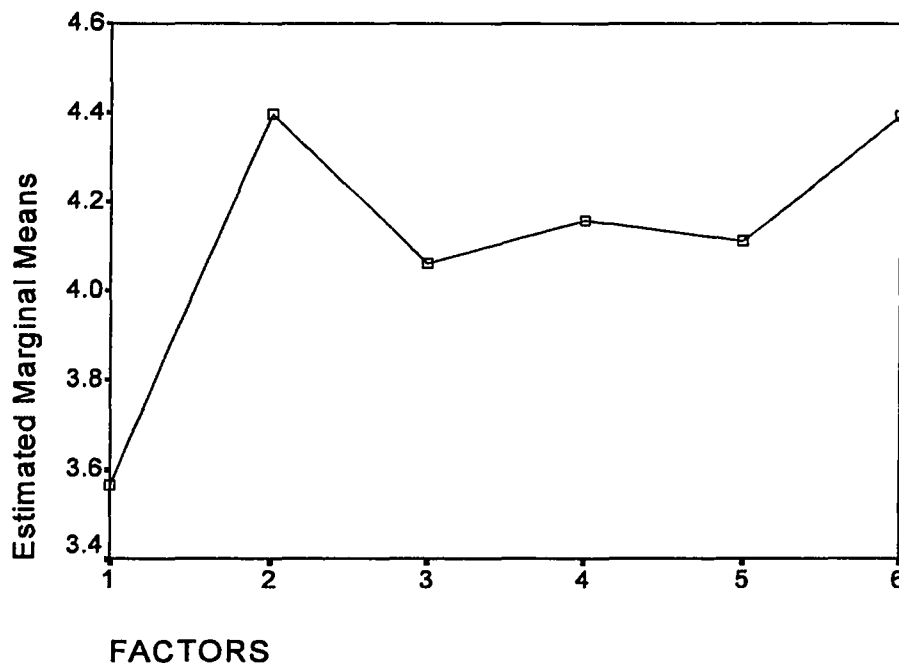
Pairwise Comparisons		Mean Diff (I-J)	Sig.	95% Confidence Interval for Difference	
(I) Factors	(J) Factors			Lower Bound	Upper Bound
1 Management and Care Coordination ( M=3.56)	2	-0.83	*	-0.88	-0.79
	3	-0.50	*	-0.54	-0.45
	4	-0.59	*	-0.64	-0.55
	5	-0.55	*	-0.59	-0.50
	6	-0.83	*	-0.88	-0.78
2 Critical Thinking Problem Solving (M=4.40)	1	0.83	*	0.79	0.88
	3	0.33	*	0.29	0.38
	4	0.24	*	0.19	0.29
	5	0.29	*	0.25	0.33
	6	0.00		-0.04	0.05
3 Self Management Skills (M=4.06)	1	0.50	*	0.45	0.54
	2	-0.33	*	-0.38	-0.29
	4	-0.10	*	-0.14	-0.05
	5	-0.05		-0.10	0.00
	6	-0.33	*	-0.38	-0.28
4 Direct Care Skills Technical Skills (M=4.16)	1	0.59	*	0.55	0.64
	2	-0.24	*	-0.29	-0.19
	3	0.10	*	0.05	0.14
	5	0.05		0.00	0.10
	6	-0.24	*	-0.29	-0.18
5 Psychosocial Skills (M=4.11)	1	0.55	*	0.50	0.59
	2	-0.29	*	-0.33	-0.25
	3	0.05		0.00	0.10
	4	-0.05		-0.10	0.00
	6	-0.28	*	-0.34	-0.23
6 Interpersonal Communication Skills (M=4.39)	1	0.83	*	0.78	0.88
	2	0.00		-0.05	0.04
	3	0.33	*	0.28	0.38
	4	0.24	*	0.18	0.29
	5	0.28	*	0.23	0.34

Note: Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments). \*The mean difference is significant at the .05 level.

Table 12 contd.

Repeated Measures, ANOVA of Scale Means

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
FACTORS	(Sphericity Assumed)	328.93	5	65.79	312.77	0.00
Error	(Sphericity Assumed)	741.43	3525	0.21		

**Estimated Marginal Means of MEASURE\_1**

Note: Factor 1: Management and Care Coordination; Factor 2: Critical Thinking/Problem Solving; Factor 3: Self Management Skills; Factor 4: Direct Care Skills/Technical Skills; Factor 5: Psychosocial Skills; Factor 6: Interpersonal/Communication Skills.



Research Questions One, Two, and Three are:

Research Question One. How do the core competencies of graduates of basic nursing education programs as perceived by nursing staff differ from those perceived by nursing faculty?

Research Question Two. How do the core competencies of graduates of basic nursing education programs as perceived by nursing staff differ from those perceived by nurse executives of health care agencies?

Research Question Three. How do the core competencies of graduates of basic nursing education programs as perceived by nurse executives of health care agencies differ from those perceived by nursing faculty?

To answer these research questions, group means were calculated for each of the six scales (see Table 13). One Way ANOVAs were used to determine whether there were statistically significant differences between the groups. The independent variable was “position.” The dependent variables were the six competency scales. Because the independent variables included three or more groups, when a statistically significant difference between the groups ( $p < .05$ ) was identified via ANOVAs (see Table 14), post hoc analyses were conducted. Tukey’s HSD was used to determine where the “between groups” differences actually were. For the six competency scales, there were no statistically significant differences between the perceptions of nursing staff and nurse executives. To the contrary, the perceptions of nursing faculty were significantly different from those of nurse executives and nursing staff for some competencies.

Table 13

Comparison of Scale Means by Position

<b>Competency Scale</b>	<b>Position</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
<b>Critical Thinking/Problem* Solving</b>	Staff	282	4.27	.58
	Executive	117	4.34	.53
	Faculty	216	4.62	.45
	Other	67	4.30	.58
	<b>Total</b>	<b>682</b>	<b>4.40</b>	<b>.55</b>
<b>Interpersonal/ Communication Skills</b>	Staff	282	4.39	.63
	Executive	117	4.34	.64
	Faculty	216	4.43	.58
	Other	67	4.40	.57
	<b>Total</b>	<b>682</b>	<b>4.39</b>	<b>.61</b>
<b>Direct Care Skills/ Technical Skills</b>	Staff	282	4.23	.61
	Executive	117	4.11	.57
	Faculty	216	4.09	.61
	Other	67	4.26	.56
	<b>Total</b>	<b>682</b>	<b>4.17</b>	<b>.60</b>
<b>Psychosocial Skills*</b>	Staff	282	3.98	.65
	Executive	117	4.06	.59
	Faculty	216	4.32	.56
	Other	67	4.04	.56
	<b>Total</b>	<b>682</b>	<b>4.11</b>	<b>.62</b>
<b>Self Management Skills</b>	Staff	282	4.10	.64
	Executive	117	4.04	.60
	Faculty	216	4.03	.63
	Other	67	4.06	.58
	<b>Total</b>	<b>682</b>	<b>4.06</b>	<b>.62</b>
<b>Management and Care Coordination Skills</b>	Staff	282	3.50	.69
	Executive	117	3.54	.67
	Faculty	216	3.65	.66
	Other	67	3.61	.69
	<b>Total</b>	<b>682</b>	<b>3.57</b>	<b>.68</b>

\*p&lt; .05

Table 14

Analysis of Variance of Scale Means for Position

<b>Source (Between Subjects)</b>	<b>df</b>	<b>F</b>
Management and Care Coordination Skills	3	2.349
Critical Thinking/ Problem Solving	3	18.863*
Self Management Skills	3	.509
Direct Care Skills/ Technical Skills	3	3.035*
Psychosocial Skills	3	14.054*
Interpersonal/ Communication Skills	3	.539

\* $p < .05$

Management and Care Coordination Skills. There were no statistically significant differences among the perceptions of nursing staff, nurse executives and nursing faculty for the Management and Care Coordination Skills Scale. All respondents perceived the competencies within this scale “important,” as evidenced by means ranging from 3.50 - 3.61, with a total group mean of 3.57 ( $SD = .68$ ), although of lesser importance than all other scales.

Critical Thinking and Problem Solving Skills. The importance of Critical Thinking/Problem Solving was rated significantly higher by nursing faculty ( $M = 4.62$ ,  $SD = .45$ ) than by nursing staff ( $M = 4.27$ ,  $SD = .58$ ) and nurse executives ( $M = 4.34$ ,  $SD = .53$ ). The post hoc analysis confirmed statistical significance of the faculty’s importance rating of this competency. Also, the importance of all component competencies was rated higher by nursing faculty than by nursing staff or by nurse executives. There were no statistically significant differences between the perceptions of nursing staff and nurse executives.

Self Management Skills. There were no statistically significant differences among the perceptions of nursing staff, nurse executives and nursing faculty for the Self Management Skills Scale. All respondents perceived the competencies within this scale “very important,” as evidenced by means ranging from 4.03 - 4.10, with a total group mean of 4.06 ( $SD = .62$ ).

Direct Care Skills/Technical Skills. Although the ANOVA indicated that there were statistically significant differences among nursing staff, nurse executives and nursing faculty, ( $F=3.035$ ,  $df=3$ ), the post hoc analysis, using Tukey’s HSD, failed to demonstrate any significant differences. Nursing staff, however, had the highest mean for this competency.

Psychosocial Skills. The importance of Psychosocial Skills was rated significantly higher ( $F = 14.054$ ,  $df=3$ ) by nursing faculty ( $M = 4.32$ ,  $SD = .56$ ) than by nursing staff ( $M = 3.98$ ,  $SD = .65$ ) or by nurse executives ( $M = 4.16$ ,  $SD = .59$ ). The post hoc analysis confirmed the fact that faculty’s importance rating was significantly higher than either nursing staff or nurse

executives. Also, the importance of all component competencies was rated higher by nursing faculty than by nursing staff or by nurse executives. There were no statistically significant differences between the perceptions of nursing staff and nurse executives.

Interpersonal /Communication Skills. There were no statistically significant differences among the perceptions of nursing staff, nurse executives and nursing faculty for the Interpersonal /Communication Skills Scale. All respondents perceived the competencies within this scale “very important,” as evidenced by means ranging from 4.34 - 4.43, with a total group mean of 4.39 ( $SD=.61$ ).

Core competencies were defined as those competencies rated “very important” or “essential” ( $M \geq 4.0$ ) by 70% of respondents. Therefore, five of the six competency scales would be classified as core competencies. Factor One, Management and Care Coordination would not be classified as a core competency since the scale mean was 3.57. To more closely analyze the competencies from the perspectives of nursing staff, nurse executives and nursing faculty, the means for each of the competency statements were examined and measured against the criterion for a core competency.

Sixteen of the 25 competency statements met the criterion for a core competency (see Table 15). Twelve of the 16 core competencies were identified by nursing staff, nurse executives and nursing faculty. “Ability to function autonomously in the absence of a physician” and “Sensitivity to the needs and situations of diverse patient groups” were rated as core competencies by nursing staff and nurse executives but not nursing faculty. The “Ability to conduct psychosocial assessments of patients, families and communities” was identified as a core competency by nursing faculty and nurse executives but not nursing staff. “Experience with a wide range of patient conditions; Proficient clinical nursing knowledge and skills” was identified as a core competency by nursing faculty and

Table 15

**Listing of Core Competency Statements by Position, Ranked by Means****(M > 4.0, descending order)**

Nursing Staff	Nurse Executives	Nursing Faculty
Physical assessment	Physical assessment	Documentation
Flexibility	Documentation	Critical thinking
Critical thinking	Critical thinking	Teaching
Communicate with physician	Flexibility	Physical assessment
Documentation	Communicate with physician	Analytic skills
Technical skills	Team member	Ethics
Team member	Ethics	Flexibility
Teaching	Teaching	Team member
Ethics	Technical skills	Relationship
Initiative	Analytic skills	Communicate with physician
Patient conditions	Initiative	Psychosocial assessment
Function autonomously	Relationship	Sensitivity to Diversity
Analytic skills	Psychosocial assessment	Initiative
Relationship	Function autonomously	Technical skills
Independence		Patient conditions
Sensitivity to Diversity		

**Note.** A core competency is a statement rated “very important” (4) or “essential” (5) by 70% or more of a participant group. Nursing staff was the only group to rate “Independence: the ability to work without readily available support” as “very important.”

nursing staff but not nurse executives. Nursing staff was the only group to identify “Independence: the ability to work without readily available support” as a core competency.

There were no statistically significant differences between the perceptions of nursing staff and nurse executives for any of the core competencies, whether perceived by either or both. Faculty, however, perceived the following competencies as much more important than did nursing staff or nurse executives: 1) Ability to build a continuing relationship with patients and their families; 2) Ability to teach and counsel patients and their families; 3) Analytic skills: ability to gather and interpret data about patients, families and communities; 4) Ability to apply ethical principles and professional standards in decisions making; 5) Sensitivity to the needs and situations of diverse patient groups; and 6) Ability to conduct psychosocial assessments of patients, families and communities.

Additionally, “Ability to document interventions and outcomes” was rated significantly more important by nursing faculty than by nursing staff; and “Critical thinking: ability to problem solve and apply knowledge to diverse situations” was rated significantly more important by nursing faculty than by nurse executives. These competencies are representative of the Psychosocial Skills Scale or the Critical Thinking/Problem Solving Scale.

Research Question Four. What are the core competencies graduates of basic nursing education programs need in order to practice across settings and in multiple roles upon entry to practice?

To answer this research question, it was necessary to redefine the criterion for a core competency. Using the competency scales as a frame of reference, a core competency was defined as one for which the scale mean was 4.0 or higher and for which there were no statistically significant differences across work settings. The absence of statistically significant differences across work settings is very important to ensure that there is a set of knowledge, skills and abilities common to diverse health care settings and for which nurses should be educated. This would allow new graduates to function across diverse settings upon entry to practice.

Group means were calculated for each of the six scales (see Table 16). One way ANOVAs were used to determine whether there were statistically significant differences between the groups. Tukey's HSD was used to determine where the "between group differences were. The independent variable was "workplace." Workplace refers to acute care hospitals, long term care facilities and community-based settings. Schools of nursing were excluded. It was important for nurses in health care settings in which new graduates are likely to be employed to inform nursing faculty of expected competencies. The dependent variables were the competency scales. Means were calculated for each group.

From the perspective of nurses in the workplaces under consideration, there were no statistically significant differences among the group means for each of the six competency scales. All scales except Factor One, Management and Care Coordination Skills, had a mean of 4.0 or higher. Based upon the ANOVAs, the importance ratings of nurses for the Interpersonal/Communication Skills differed significantly across work



Table 16

Means for Competency Scales Based on Workplace of Respondents

Competency Statement	Workplace	N	Mean	SD
Management and Care Coordination Skills	Acute Care Hospital	269	3.46	.64
	Long Term Care Facility	41	3.59	.70
	Community-based Setting	126	3.60	.76
	Total	436	3.51	.68
Critical Thinking Problem Solving	Acute Care Hospital	269	4.26	.57
	Long Term Care Facility	41	4.33	.56
	Community-based Setting	126	4.37	.58
	Total	436	4.30	.57
Self Management	Acute Care Hospital	269	4.07	.60
	Long Term Care Facility	41	4.08	.73
	Community-based Setting	126	4.17	.64
	Total	436	4.10	.63
Direct Care Skills Technical Skills	Acute Care Hospital	269	4.21	.56
	Long Term Care Facility	41	4.14	.62
	Community-based Setting	126	4.16	.66
	Total	436	4.19	.59
Psychosocial Skills	Acute Care Hospital	269	3.99	.65
	Long Term Care Facility	41	3.96	.63
	Community-based Setting	126	4.09	.60
	Total	436	4.01	.63
Interpersonal/ Communication Skills	Acute Care Hospital	269	4.33	.66
	Long Term Care Facility	41	4.49	.52
	Community-based Setting	126	4.48	.58
	Total	436	4.39	.63

settings (see Table 17). However, using Tukey's HSD, there were no significant differences in the perceived competencies across settings in which new graduates were likely to work.

To more closely analyze the component competencies within each scale, the mean for each of the competency statements was examined and measured against the following criterion for a core competency: "one perceived 'very important' (4) or 'essential' (5) by 70% of the total group and for which there were no statistically significant differences across work settings." Chi Square Tests were used to determine if differences between groups were significant.

It is important to first consider those competencies for which there are no statistically significant differences. For 22 of the 25 competency statements, there were no significant differences among the perceptions of nurses in the three work settings. Each statement was examined to determine whether the competency was perceived "very important" or "essential" by 70% of the total respondents from all three settings. Fifteen competencies met the criterion and seven did not (see Table 18). Therefore, the 15 competencies are considered core competencies. Of the seven competencies that did not achieve 70% percent agreement with the importance ratings, five were from Factor One, Management and Care Coordination Skills. The other two were "Recognition and acceptance that the nurse does not control the patient setting" and "Knowledge of and ability to use various patient care technologies."

The three competencies for which there were statistically significant differences and by that criterion are not considered as core competencies include: 1) Knowledge of

Table 17:

Analysis of Variance of Scale Means for Workplace<sup>1</sup>

<b>Source (Between Groups)</b>	<b>df</b>	<b>F</b>
Management and Care Coordination Skills	2	1.977
Critical Thinking/ Problem Solving	2	1.679
Self Management Skills	2	1.254
Direct Care Skills/ Technical Skills	2	.530
Psychosocial Skills	2	1.324
Interpersonal/ Communication Skills	2	3.251*

Note. <sup>1</sup>Workplace includes acute care hospital, long term care facility and community-based settings. Post hoc tests demonstrated no significant differences between groups.

\* $p < .05$

Table 18

Percent of Respondents According to Workplace Who Rated Competencies “Very Important” or “Essential”

Competency Statement	Workplace (Percent who rated “very important” or “essential”)				Pearson Chi-Square	
	Acute Care Hospital	Long Term Care Facility	Community- based Setting	Total	Value	df
Ability to <b>communicate with physicians</b>	82.2%	90.2%	91.3%	<b>85.6%</b>	6.572*	2
Ability to function as a <b>member of an interdisciplinary team.</b> (C)	82.9%	90.2%	83.3%	<b>83.7%</b>	1.427	2
Ability to <b>build a continuing relationship</b> with patients and their families. (C)	73.2%	80.5%	80.2%	<b>75.9%</b>	2.767	2
Ability to <b>teach and counsel patients</b> and their families. (C)	78.8%	80.5%	85.6%	<b>80.9%</b>	2.554	2
Ability to <b>document interventions and outcomes.</b> (C)	85.1%	87.8%	87.3%	<b>86.0%</b>	.458	2
<b>Critical thinking:</b> ability to <b>problem solve</b> and apply knowledge to diverse situations. (C)	90.0%	90.2%	88.0%	<b>89.4%</b>	.380	2
<b>Analytic skills:</b> ability to gather and interpret data about patients, families and communities. (C)	79.2%	73.2%	76.2%	<b>77.8%</b>	.993	2
Ability to <b>complement physicians</b> to maximize physicians’ and nurses’ productivity.	54.9%	50	61.6%	<b>56.4%</b>	2.301	2
Ability to <b>apply ethical principles</b> and professional standards in decisions making. (C)	78.7%	78.0%	88.1%	<b>81.3%</b>	5.351	2

Table 18 contd.

Competency Statement	Workplace (Percent who rated "very important" or "essential")				Pearson Chi-Square	
	Acute Care Hospital	Long Term Care Facility	Communit y- based Setting	Total	Value	df
<b>Case management skills:</b> the ability to intervene across the continuum of care; ability to consider and act upon the cost effects of decisions regarding care.	46.8%	46.2%	54.8%	<b>49.1%</b>	2.319	2
<b>Ability to manage nurse assistants</b> and unlicensed assistive personnel.	57.2%	73.2%	58.7%	<b>59.2%</b>	3.748	2
Ability to <b>coordinate other service providers</b> , such as social workers, physical therapists, dieticians, etc.	44.2%	58.5%	50.0%	<b>47.2%</b>	3.457	2
Knowledge of <b>community resources</b>	34.6%	51.2%	47.6%	<b>39.9%</b>	8.505*	2
<b>Sensitivity to the needs and situations of diverse patient groups</b> , e.g., elderly, ethnic groups, children. (C)	70.3%	68.3%	77.0%	<b>72.0%</b>	2.237	2
Experience with a wide range of <b>patient conditions</b> ; Proficient clinical nursing knowledge and skills. (C)	74.2%	73.2%	73.0%	<b>73.7%</b>	.065	2
Knowledge and skills related to <b>information management</b> .	49.6%	46.3%	44.4%	<b>47.8%</b>	.962	2
Knowledge of and ability to use <b>various patient care technologies</b>	59.7%	46.3%	59.5%	<b>58.4%</b>	2.706	2

Table 18 contd.

Competency Statement	Workplace (Percent who rated “very important” or “essential”)				Pearson Chi-Square	
	Acute Care Hospital	Long Term Care Facility	Community- based Setting	Total	Value	df
Ability to conduct <b>physical assessments</b> of patients. (C)	93.3%	92.7%	93.7%	<b>93.3%</b>	.048	2
Ability to conduct <b>psychosocial assessments</b> of patients, families and communities. (C)	73.2%	63.4%	68.3%	<b>70.9%</b>	2.25	2
<b>Technical skills</b> , such as proficiency in handling IVs venipuncture skills, medication administration, special treatments and procedures. (C)	84.0%	80.5%	75.4%	<b>81.1%</b>	4.117	2
<b>Initiative</b> : self starting and self-motivated, as insetting own schedules. (C)	83.9%	70.7%	80.2%	<b>81.6%</b>	4.330	2
<b>Independence</b> : the ability to work without readily available support.	67.9%	70.7%	80.2%	<b>71.7%</b>	6.362*	2
<b>Flexibility</b> : the ability to adjust to unforeseen changes in patient’s condition. (C)	91.8%	90.2%	87.3%	<b>90.3%</b>	1.981	2
<b>Recognition and acceptance that the nurse does not control the patient setting.</b>	56.4%	65.0%	63.2%	<b>59.2%</b>	2.253	2
Ability to <b>function autonomously</b> in the absence of a physician. (C)	72.6%	73.2%	78.6%	<b>74.4%</b>	1.657	2

Note. Core Competencies are indicated by a “C” in parenthesis following the statement. \* $p \leq .05$

community resources; 2) Independence: the ability to work without readily available support; and 3) Ability to communicate with physicians. The item means for nurses in the acute care hospital were significantly lower for each of these competencies than that for nurses in the long term care or community-based setting. Only 34.6% of nurses in the acute care facility rated Knowledge of Community Resources as “very important” or “essential” compared with 51.2% of long term care nurses and 47.6% of nurses employed in community-based settings. In a like manner, 70.7% of nurses from long term care and 80.2% from community-based settings rated Independence as very important or essential, when only 67% of nurses from acute care hospitals rated it that important.

Communication with Physicians was rated highly (“very important” or “essential”) by 82.2% of nurses in the acute care hospital, 90% from long term care and 91.3% in community-based settings. Of importance to consider, although Independence and Communication with Physicians were rated highly by more than 70% of respondents, there were statistically significant differences among groups, resulting in their failure to meet the established criterion for a core competency. Issues inherent in this criterion for a core competency will be discussed in Chapter 5.

Thus, using the established criteria and the listed competencies, 15 of the 25 competency statements were considered as core competencies that new graduates would need in order to function across settings (see Table 18). Participants, however, were also given the opportunity to list any other competencies (knowledge, skills or abilities) that they perceived as “essential” for a new graduate, but that was not listed. More than 400

statements including competencies, tasks, activities, attributes and associated comments were written (see Appendix E and F). After consensual validation by a panel of experts, the participants' comments were categorized into 14 competencies. Of these 14 competencies, eight were determined to be already included on the research instrument (although stated differently in some cases) and six were new (See Table 19). The competencies that were listed on the survey instrument will be discussed first.

Participants added clarification to the competency Interpersonal/Communication Skills by specifying the importance of all types of communication, verbal and non-verbal. Additionally communication with patients, families and all health professionals, not just physicians, was mentioned. Conflict management skills was another important communication competency identified.

Critical Thinking/Problem Solving, Flexibility and Physical Assessment Skills were described in a number of the respondents' comments. Participants did not, however, provide any sub-competencies or clarifying statements. All three of these competencies had means greater than 4.47, indicating a perception of "very important." Physical Assessment Skills had the highest overall mean importance rating (4.61,  $SD = .61$ ).

Cultural Competence was reflected on the instrument as "sensitivity to the needs and situations of diverse patient groups." Participants expanded this competency to include a diverse workforce, families and significant others.

Professional Identity/Professional Ethics was identified on the instrument as "ability to apply ethical principles and professional standards in decision making."

Participants repeatedly identified the need for integrity, accountability, professionalism,



Table 19

Competencies Recommended by Study Participants

<b>Part I: Competencies Represented on Survey Instrument</b>	<b>Frequency of Comments Related to Competencies (n ≥ 400)</b>
1. Critical Thinking/Problem Solving	17
2. Cultural Competence	11
3. Direct Care/Technical Skills	21
4. Flexibility	3
5. Interpersonal/Communication Skills	43
6. Management and Care Coordination Skills	13
7. Physical Assessment Skills	10
8. Professional Identity/Professional Ethics	46
<b>Part II: Not Listed on Survey Instrument</b>	
1. Caring	19
2. Computer Literacy	8
3. Priority Setting/Organizational/Time Management Skills	36
4. Professional Knowledge Base	45
5. Reflective Practice/Research Skills/Quality Improvement	16
6. Self Assessment/Continued Competency	85

Note. Part I includes competencies listed under a construct or a specific competency listed on instrument. Part II are “new” competencies, not listed on the survey instrument.

and advocacy. Stark, et al., (1986b) identified these competencies as part of the professional attitude “Professional Identity” or “Professional ethics.” “Professional Identity” was defined as the degree to which graduates integrate the profession’s norms (standards), competencies and values into a conception of role (Stark, et al., 1986b). Participants’ comments were consistent with this definition as well as the statement “apply professional standards.” “Professional ethics,” on the other hand, refers to the internalization of the profession’s code of ethics (principles and standards); suggesting ethical behavior as an educational program outcome. Apparently the statement, as written, was not clear, required emphasis or did not fully imply the intended competency or professional attitude.

Comments by participants related to Management and Care Coordination Skills emphasized the need for new graduates to be able to deliver safe, effective care in non-traditional settings and to manage care for a group of patients. Delegation Skills were identified as required management skills. As the skill mix is changing and nurses are working with and supervising nursing assistants and other unlicensed assistive personnel, delegation skills are gaining in importance. Often nursing students are not taught delegation skills. In fact, as recent as January 1999, in Virginia, “delegation” was added to the Nurse Practice Act.

Direct Care Skills/Technical Skills was expanded by the listing of additional basic and advanced clinical skills, e.g. catheterization, interpretation of electrocardiograms, advanced cardiac life support, and phlebotomy. The original competency was meant to be explanatory by the listing of examples of technical skills. It was not meant to be

exhaustive. Some participants may have misinterpreted the statement or felt that the statement was incomplete. Therefore, participants listed other technical skills believed to be essential but not listed. Stark and others (1986b) refers to this competency as “Technical Competence”--the ability to perform fundamental skills required of the professional. The fact that participants listed many of the competencies that were included on the instrument suggests that perhaps the competencies were very important and required emphasis; or the statement was not clear, interpreted wrong or required further clarification.

The “new” competencies identified by the participants include 1) Caring 2) Priority Setting/Organizational/Time Management Skills; 3) Self Assessment/Continued Competency 4) Computer Literacy 5) Reflective Practice/Research Skills/Quality Improvement; and 6) Professional Knowledge Base. Most of these competencies are perhaps better termed as “professional attitudes” (Stark, et al., 1985b).

Caring was emphasized as the “art of nursing”. Repeatedly participants wrote that the nurses should demonstrate a caring and compassionate nature, respectful of patient and family. “Caring” meets Stark, et al., (1986b) definition of “becoming professional.” It is more an attitude than a competency; however it is an attribute essential to professional competency, especially nursing (Benner, 1984).

Professional Knowledge Base was not included on the instrument, nor referred to as a broad concept. Participants emphasized the importance of assuring that new graduates have a full understanding of pharmacology and pathophysiology. Interestingly and consistent with the influence of “managed care” as a primary force affecting nursing

education and practice, participants identified knowledge of the economics of healthcare, including reimbursement mechanisms and principles as essential. Professional Knowledge Base is most likely the “conceptual competence” identified by Stark, Lowther and Haggerty (1986). It refers to the foundational knowledge upon which professional practice is based, otherwise referred to as “professional science” or “theoretical foundation.” Nursing, as most other health professions, highly rates conceptual competence as a professional outcome. (Stark, et al., 1986b).

Self Assessment/Continued Competency elicited the most comments. Repeatedly, participants commented on the need for new graduates to “recognize their strengths and weaknesses” and “seek appropriate assistance when needed.” Additionally, they emphasized the need for life-long learning and professional development. This competency is analogous to the professional attitude--“motivation for continued learning,” that acknowledges the dynamic nature of the profession and the fact that the delivery of services changes as new knowledge, skills and technologies become available (Stark, et al., 1986b). Participants emphasized the need for new graduates to accept responsibility for ongoing personal growth and development.

Although it might be said that if one has very good critical thinking and problem solving abilities that he/she will also be able to determine appropriate priorities, organize care and effectively manage time, numerous participants listed Priority Setting Organizational/Time Management Skills as an essential competency. Working with limited resources, human and material, creates or perpetuates the need for efficiency and productivity. Priority Setting/Organizational/Time Management Skills requires

Integrative competence: “the ability to meld conceptual, contextual, technical and interpersonal competencies so as to make informed judgements about professional strategies to be employed in practice.” (Stark, et al., 1986, p.40). Although Integrative competence is a complex ability, usually acquired with experience, participants perceived it as an essential competency for new graduates.

Computer literacy was listed by a small number of participants. Although it could have been grouped with technical skills, it was separately listed as a competency because of the rapid infiltration of computers and related technology into all aspects of the care delivery process and in all patient care settings.

Although Analytic Skills: Ability to gather and interpret data was listed on the survey instrument, participants specifically identified the ability to apply theory to practice, integrate research findings and assess the relation of patient outcomes to treatment as essential competencies. Additionally, participants emphasized the need for quality improvement and research skills. Thus, the competency, Reflective Practice/Research Skills/Quality Improvement Skills was perceived as a “new” core competency, most comparable to the professional attitude of “Scholarly Concern for Improvement” (Stark, et al., 1986b).

### Summary of Findings

All competencies were rated “important, very important or essential.” The high ratings suggest that all competencies are important, although some are more important than others. Those competencies rated “very important” were considered core competencies.

The main differences in perceptions of core competencies were associated with the Critical Thinking/Problem Solving and Psychosocial Skills Scales which faculty perceived as more important than did nursing staff or nurse executives. Although rated important, Management and Care Coordination Skills was the only scale consistently rated less important than the other scales and would not be classified as a core competency based upon study criteria.

There was some variation in the number of competencies perceived as “core” when analyzed from the perspective of “position” versus “workplace.” This may have been due to the fact that the criteria used to determine a core competency varied with the independent variables.

Respondents provided an extensive list of competencies perceived as essential for new graduates. Over half of the perceived competencies were already listed on the survey instrument. Six “competency statements” were new. Further discussion of the findings is presented in Chapter 5.

## Chapter 5

### Discussion

#### Introduction

This descriptive survey had three primary purposes. The first purpose was to measure and compare nursing staff, nurse executives and nursing faculty's perceptions of the required competencies for newly licensed registered nurses. The second purpose was to determine whether there were any differences in the competencies required of entry level nurses across health care settings. The third purpose was to use the data to describe the knowledge, skills and abilities (core competencies) new graduates need in order to practice in diverse settings upon entry to practice. The focus of the study was on the "newly licensed registered nurse," not graduates of any particular basic nursing education program.

A discussion of the findings of this investigation is structured around the factors contributing to the problem, the research questions that the study sought to answer and the conceptual framework for the study. Conclusions, limitations of the study, implications and recommendations for nursing education, practice and research are discussed also.

#### Factors Contributing to the Problem

Efforts to control spiraling health care costs, while providing increased access to

quality health care services have led to a transformation in the financing and delivery of health care in the United States. Health care is now a competitive and complex marketplace, in which all participants are affected. Reimbursement mechanisms have changed from a primary mode of “fee-for-service” or cost-based reimbursement to “managed care.” Although hospitals will remain vitally important to our delivery system well into the 21<sup>st</sup> century, their role is becoming less dominant. As hospital stays have been shortened, patients with continuing illnesses are being provided care in outpatient, ambulatory and other community-based settings. Additionally, as advances in technology have occurred, diagnostic and surgical tests and procedures are increasingly being provided as outpatient services. Furthermore, financial incentives are being provided for efficient and productive health care delivery. These trends, among many, have resulted in changes in the roles, responsibilities and relationships of health care professionals.

The change, however, is not complete. The transformation of health care financing and delivery is a dynamic process. Thus, there are four key assumptions for the future of health care. The first assumption is that the efforts to provide health care in a cost-effective, resource efficient manner will continue as Americans seek increased access to quality health care. Whether managed care expands or is replaced by an alternative approach to cost containment, mandates to control costs and to manage the delivery of health care services will continue.

The second assumption is that health care providers will need to continue to make fundamental changes in the manner and place where they provide care if they are to deliver the same or higher quality services under more rigorous regulatory and financial



pressures. The amount of resources (people, materials, equipment) used to produce the desired outcomes will be a major focus. Alterations in the staffing mix of health personnel, that is, the number and types of health care professionals who provide the care, will continue to be a priority, as the most cost-effective skill mix continues to change and thus, is continually pursued.

The third assumption is that the public will continue to seek quality, accessibility, accountability and cost-effectiveness in all aspects of their lives, including health care and education. This will place increasing external and internal pressures on the health care industry and those responsible for educating health care professionals.

The fourth assumption is that nursing, as the largest single group of health professionals, will need to be especially responsive to the dynamic nature of the health care market. Nurses must be prepared to function in the evolving health care delivery system, empowered with the appropriate knowledge, skills and abilities. The nursing community (nursing staff, nurse executives and nursing faculty), therefore, is challenged to clearly articulate the expected competencies required of new graduates to meet the demands of the marketplace and systematically redesign curricula to support the development of those competencies. Additionally, employers of nurses, particularly those in community-based settings must reexamine their philosophies, qualifications for hire, orientation programs for new graduates and nursing staff development programs in order to support the inevitable changes in the financing and delivery of health care services. Collaboration among nursing staff, nurse executives and nursing faculty is required to

produce a nursing workforce competent to function in the emerging health care delivery system.

As Salsberg and Kovner (1995) wrote:

The health workforce is the infrastructure of the health care delivery system.

Even with major technological advances, it is the health worker who ultimately determines the availability, quality, and cost of health services. Any effort to reform or improve health services or control costs must consider the supply, distribution, use, and education of the health workforce. Conversely, any change in financing, organization, or technology will also impact on health personnel (p. 55).

### Sample

Nursing staff, nurse executives and nursing faculty in Virginia were surveyed. In Virginia, there is no centralized database for the nursing workforce. Therefore, to ensure an adequate sample size of each group, purposive sampling was used for nurse executives and nursing faculty. Nursing staff were randomly selected from a listing of all registered nurses in Virginia with an in-state mailing address.

All participants were asked to classify themselves as nursing staff, nurse executives, nursing faculty, or other (retired or unemployed). The categories in which nurses were asked to classify themselves were very broad and represented a large variety of positions, particularly nursing staff and nurse executives. Nursing staff was used to refer to nurses in non-management positions, who were likely to provide direct patient care. Roles included in that definition were staff nurses, clinical nurse specialists, nurse

practitioners, home health nurses, office nurses, and staff development educators as well as others. Both independent and dependent practitioners were included. Several nurse practitioners commented that they did not agree with the classification of “nursing staff.” “Nursing staff” was chosen, however, rather than “staff nurse” because of its broader definition, comparable to “medical staff,” and the general perception of “staff nurses” as “beginners” or “nurses who work in hospitals.” Unlike some of the earlier studies that included only nurse executives (VHA, 1992; ANA, 1996), nursing staff were included because of the belief that actively practicing nurses from a variety of health care settings are in an especially strong position to assess the required knowledge, skills and abilities for entry-level practice.

Nurse executives referred to nurse managers, head nurses, nursing supervisors, nursing administrators and the like. The target group was nurses who were in middle and upper level management positions and play a key role in determining staffing mix. Use of the Virginia Organization of Nurse Executives’ membership listing was perceived as an appropriate strategy to ensure adequate representation from nurse executives.

Although approximately 63 nurse executives (54 %) were recruited via the random listing of nurses, it is likely that the sampling frame would have had to be almost twice as large in order to recruit the number of nurse executives ( $n = 117$ ) who participated in this study.

Nursing faculty was used to refer to undergraduate and graduate faculty.

Although the chief concern was faculty directly responsible for educating entry level nurses, many graduate faculty indicated that they taught in both programs. Therefore,

both undergraduate and graduate faculty were classified as “nursing faculty.”

The “other” category” posed some problems. In addition to graduate faculty who could check “other” and then specify “graduate faculty,” persons who were retired or unemployed were expected to choose “other” and indicate their status. Nurses, who classified themselves as “other,” but not as neither of the above three, were not given an option to write in a more specific classification. Some participants wrote in exemplars and others did not. A very small percentage of respondents, however, fit this category (less than 10%). Nurses classified as “other,” excluding graduate faculty, were not considered when interpreting the data, except when comparing respondents with non-respondents.

It was anticipated that the response rate for the staff nurses would be lower than that for either nurse executives or nursing faculty. Since nursing staff were selected randomly from a listing of almost 65,000 nurses and most nurses maintain their license, whether active or not, it was anticipated that some of the nurses randomly selected would be retired, unemployed, or working in non-nursing positions, none of which were in the targeted sample for the study. Additionally, it was anticipated that such nurses may not return the survey or the survey response might be unusable. Higher response rates were expected and received from nursing faculty and nurse executives for whom convenience samples were used.

### The Research Instrument

An investigator-modified questionnaire was used to measure and compare participants’ perceptions of the importance of 25 competency statements for beginning

nursing practice. Based upon an analysis of the data, core competencies graduates of based nursing education programs require upon entry to practice were described.

Reliability and validity of the instrument was established for this study. Content validity of the instrument was supported by the review of the literature, representativeness of the population, pilot testing and review by content experts. Using a factor analysis process, the instrument was subdivided into six constructs (scales). The internal consistency reliability of the instrument fully supported four of the scales. Two of the scales, Psychosocial Skills and Interpersonal/Communication Skills were marginally supported (reliability  $\alpha < .70$ ); therefore, they should be reviewed for completeness and retested.

#### The Research Questions

This study was guided by four research questions. Research Questions One, Two and Three will be discussed together. They were as follows:

Research Question One. How do the core competencies of graduates of basic nursing education programs as perceived by nursing staff differ from those perceived by nursing faculty?

Research Question Two. How do the core competencies of graduates of basic nursing education programs as perceived by nursing staff differ from those perceived by nurse executives of health care agencies?

Research Question Three. How do the core competencies of graduates of basic nursing education programs as perceived by nurse executives of health care agencies differ from those perceived by nursing faculty?

The mean ratings of the six competency scales ranged from 3.57 to 4.40. This is a

very narrow range. All competency clusters were perceived unquestionably “important.” The high importance ratings provide support for the hypothesis that a “core set of competencies are identifiable.” Discussion of the competency scales will precede that of the component statements.

Despite the differences in years of nursing experience, highest level of education and position, there were no statistically significant differences between nursing staff and nurse executives’ perceptions of core competencies based upon scale means. When there were statistically significant differences between the perceptions of nursing faculty and nurse executives or nursing staff, faculty rated the competencies (by scales) more important than did nurse executives or nursing staff.

Management and Care Coordination Skills. There were no statistically significant differences among the nursing staff, nurse executives, or nursing faculty’s perceptions of the importance of Management and Care Coordination Skills, suggesting that it is a competency for which there is consensus. Because the scale mean was less than 4.0 (“important”), it was excluded from being considered a core competency. As previously described, the Management and Care Coordination Skills focus on coordinating patient care activities, the people involved in the processes, and the management of information required for the provision of care across the continuum. These activities are designed to promote efficiency and effectiveness of care delivery. As managed care and other strategies to control health care costs are implemented, it is anticipated that the competencies within this scale will become even more important. A possible explanation for the fact that this scale was rated lowest in mean importance is related to a lag in

thinking. Nursing care delivery is still often site specific with very few nurses practicing in more than one setting. Additionally, nursing care is primarily provided in the acute care setting. Thus, although nursing has acknowledged the need to be more community focused, the paradigm shift has been slow and is incomplete (AONE, 1993; ANA, 1993; AACN, 1993). Thus, without a futuristic perspective, the competencies required for that practice are likely to be perceived less important.

Critical Thinking/Problem Solving was perceived significantly more important by nursing faculty than by nursing staff or by nurse executives. For more than a decade, critical thinking/problem solving has been an expected program outcome of all NLN accredited programs. The curriculum revolution of the 1980s heralded a shift in the focus of professional nursing from psychomotor skills to intellectual skills, particularly critical thinking and analytic skills (Bevis, 1988). The NLN incorporated critical thinking and analytic skills into the accreditation criteria of baccalaureate degree programs first and ultimately all basic nursing education programs (NLN, 1992; NLN, 1996; NLN, 1998). In addition, the American Association of Colleges of Nursing (1998) identified critical thinking as a core competency for baccalaureate degree graduates. Faculty, therefore, were highly likely to rate this competency as very important. Several of the sub-competencies were rated significantly more important by nursing faculty than by nursing staff or by nurse executives.

Critical thinking, a process involving questioning, analysis, synthesis, interpretation and inference, is one such sub competency. It is analogous to Stark's "integrative competency." Because critical thinking requires integrative competence, it

is likely that nursing staff and nurse executives expect the new graduate to develop this competency with work experience rather than possess it upon graduation. Yocum (1997) reported, however, that newly licensed nurses are “often” engaged in cognitive processes such as critical thinking, problem solving, the application of principles to new situations and synthesis of information.

Other competencies within this scale that were rated significantly more important by nursing faculty include: 1) Ability to teach and counsel patients and their families; 2) Analytic skills: ability to gather and interpret data about patients, families and communities; and 3) Ability to apply ethical principles and professional standards in decision making. Possible explanations for the differences in perceptions between participants relate to their personal attributes. Nursing faculty had higher levels of education, on average, than nursing staff and nurse executives. Higher levels of education are associated with greater importance being ascribed to intellectual skills such as critical thinking abilities and analytic skills (Gambino, 1996).

Self Management Skills. There were no statistically significant differences among the nursing staff, nurse executives, or nursing faculty’s perceptions of the importance of Self Management Skills, suggesting that it is a competency for which there is consensus. This scale was the only one that was fully confirmed by the factor analysis process. The competencies within this scale were rated especially high by nursing staff. Participants’ comments focused on the nature of professional practice, even for new graduates, in which nurses have autonomy and are expected to function independently, if required. One respondent wrote in relation to this competency that new graduates should possess the



“(a) bility to function as a member of a professional practice group” and another wrote “Conduct reflects professionalism; Functions as a team player; take(s) ownership for decisions and seeks opportunities for professional growth.”

Psychosocial Skills was perceived significantly more important by nursing faculty than by nursing staff and nurse executives. Broader knowledge and skills in meeting the psychosocial needs of patients will be required for practice in the emerging health care delivery system and increasingly diverse society (O’Neil, 1998).

Four competencies varied somewhat among positions. They are discussed below.

Independence is a valued competency from the perspective of nursing staff and is highly correlated with job satisfaction. Approximately 72% of nursing staff perceived this competency as “very important.” Faculty usually perceive the new graduate as a “novice” or “advanced beginner,” as defined by Benner (1984) and therefore, do not expect them to function independently. Benner’s Model is generally accepted by the nursing community, known as the “Novice to Expert Model,” and is used to explain different levels of functioning of nurses, based primarily on experience and associated skill acquisition (1984). The novice or advanced beginner usually requires a mentor or preceptor to assist with providing care and understanding situations encountered in practice.

According to the ANA study (1996), however, approximately 66% of hospitals are requiring that nurses learn how to work more independently and with less supervision. Home care and ambulatory care settings generally do not hire new graduates because of the perception that new graduates are not competent to function independently (ANA,

1996; AAACN & ANA, 1997; Kalnins, 1989). In community-based settings, nurses are often required to function more independently. Nurses from these workplaces rated independence more important than did nurses from acute care hospitals. Independence, however, should be differentiated from “independent,” working alone. Independence was defined as the ability to work without readily available support. It does not exclude consultation or using other resources, including people. Comments from participants emphasized the need for new graduates to recognize their limitations and seek assistance when needed. One participant wrote: “The ability to recognize her/his own shortcomings or lack of knowledge in some areas and the knowledge of where and when to seek assistance from someone more experienced”(is essential). Other comments are found in Appendix F.

Ability to function autonomously in the absence of a physician was rated as “very important” by nurse executives and nursing staff.” These findings are congruent with those of the ANA study (1996) in which greater than 72% of nurse executives from home care and long term care rated the competency as “extremely important.” There was less agreement among nursing faculty (64.8%). New graduates, often classified as novices or advanced beginners, are not usually expected to function autonomously upon entry to practice.

Sensitivity to the needs and situations of diverse patient groups There was more agreement among faculty (81.8%) about the importance of sensitivity to the needs and situations of diverse patient groups than among nurse executives (75.45%), or nursing staff ( 70.2%). For this competency, more than 70% of each group perceived the

competency as “very important,” however, the faculty’s mean rating was 4.27; nursing staff’s, 4.00; and nurse executives’ 3.97. It is surprising that nurse executives did not perceive this competency as “very important.” The Joint Commission on Accreditation of Health Care Organizations, an accrediting agency for hospitals and other health care organizations, has placed special emphasis on age specific and patient population-specific competencies of nurses since 1991. Numerous comments from respondents addressed this issue as well, warranting the identification of “cultural competence” as a competency. The respondents mentioned sensitivity to the diversity of team members as well as patients and families. In an increasingly diverse society, this competency is very important and may become even more so.

Experience With a Wide Range of Patient Conditions: Proficient Clinical Nursing

Knowledge and Skills Although there were no statistically significant differences between the perceptions of nursing faculty, nursing staff and nurse executives, this finding requires further discussion. Based on the established criterion, “Experience with a wide variety of patient conditions,” would be considered a core competency as perceived by nursing faculty (71.4%,  $\bar{M}$  = 4.02) and nursing staff (76.0%,  $\bar{M}$  = 4.16) but not by nurse executives (70.3%,  $\bar{M}$  = 3.97). The mean of less than 4.0 for nurse executives excludes it. An important point to consider is the fact that the competency statement, as written, consists of two related competencies that may not be interpreted the same nor rated comparably. It is presumed that if one has experience with a wide range of patient conditions, one will acquire a solid knowledge base and become proficient in clinical skills. Prior to use in another study, consideration should be given to revising the

statement. The recommended competency would be “Proficient clinical nursing knowledge and skills,” the professional knowledge base referred to by Stark, et al. (1986a).

Research Question Four. What are the core competencies graduates of basic nursing education programs need in order to practice across settings upon entry to practice?

The three entry routes to licensure as a registered nurse, without differentiation in practice, leads to confusion regarding what one can expect a registered nurse to do. In spite of long standing recommendations for the baccalaureate degree to serve as the credential for entry into professional nursing, the three entry routes have been maintained. Additionally, “Technical nurse” and “professional nurse” are terms freely used in nursing literature to distinguish between associate degree and baccalaureate degree graduates. Diploma graduates are oftentimes omitted from the discussions, although they represent approximately 25% of new graduates. In addition, although the number of diploma programs are declining nationally, there are seven diploma programs (approximately 20% of all nursing programs) in Virginia.

In the majority of acute care, long term care and community-based settings in Virginia, neither “technical nurse” nor “professional nurse” are used to distinguish expected performances among registered nurses. Nurse executives and nursing staff tend to expect all persons licensed as registered nurses to assume the same roles and responsibilities. One of the program “outcomes” defined by the National League for Nursing (NLN) is the demonstration of appropriate skills and competencies by students

at the completion of their educational program. Although NLN councils for each type of basic nursing education program have articulated expected competencies of graduates, supposedly differentiating among them by education and expected function, currently there are more similarities in expectations than differences (NLN, 1992; NLN, 1998; NLN, 1997). Critical thinking, communication and therapeutic nursing interventions have been identified as expected educational outcomes of all basic nursing education programs.

To reiterate, when referring to a competency scale, a “core competency” was defined as “one perceived ‘very important’ or ‘essential’ by 70% of the total group and for which there were no statistically significant differences across work settings.” Using work setting as the independent variable, and the competency scales as the dependent variables, from the perspectives of nurses in acute care, long term care and community-based settings, the core competencies required of RNs upon entry to practice are consistent across all settings. The degree of emphasis or frequency of use of a competency may vary with the setting. This is consistent with the findings of Haas, Hackbarth, Kavanagh & Vlasses (1995) who found that core dimensions of ambulatory practice vary by setting, but only with different emphases. For example, Knowledge of community resources is important for nurses in acute care, but not as important as it is in the community-based settings.

Although there were no statistically significant differences in the importance ratings for the competency scales, nurses from the acute care setting consistently rated the scales (except Direct Care/Technical Skills) less important than nurses from other

settings. This is not readily explainable. A potential answer is that the nature of the acute care environment, with advanced technology and acutely ill patients, requires predominately technical expertise. As the nursing curricula, particularly the baccalaureate curricula, have shifted emphasis away from technical skills, although still important, these skills tend to be rated less important. Additionally, nurses in the long term care and community-based settings place more emphasis on other types of skills, such as communication ability psychosocial skills and independence.

By the established criterion, all scales, except Management and Care Coordination Skills, are core competencies. Although the mean for Management and Care Coordination Skills is the lowest, (3.57), the skills included were rated highest by nurses from community-based settings, suggesting that this competency is important in those settings. The RN in the acute care facility has not typically been expected to demonstrate the competencies, with the possible exception of “ability to manage nurse assistants and unlicensed assistive personnel (UAP).” As health care is provided increasingly in community-based settings and focused on the continuum of care, the RN in all settings will be expected to complement physicians, utilize case management skills, manage UAPs, coordinate other service providers, have knowledge of community resources and manage information. The comments elicited from participants addressed most of the competencies within this scale, providing support for its inclusion as a core competency. Thus, there is a need to reassess the validity of the criterion for a “core competency.”

Additionally, the competencies within the Management and Care Coordination construct are associated with a higher level of cognitive and affective functioning, in

which one would need to demonstrate integrative competency (Stark, et al., 1986b). Experience in the job usually supports its development. This is a plausible reason why it was rated less important than the other five competency scales for the newly licensed registered nurse.

When considering individual competencies rather than the competency scales, a “core competency” as was previously defined, is one perceived as “very important” or “essential” by 70% of the group and for which there were no statistically significant differences across work settings. Using this criterion, a core competency would be one that is rated at least “very important” by nurses across all health care settings. Competencies that did not meet the criterion and are deserving of further discussion are “Knowledge of and Ability to Use Patient Care Technologies” and “Recognition that the Nurse Does Not Control the Patient Setting.”

Knowledge of and Ability to Use Patient Care Technologies. Fewer than 60% of respondents rated “Knowledge of and Ability to Use Patient Care Technologies” as very important. Although fewer nurses from long term care perceived it as very important, there were no significant differences among perceptions of nurses across the work settings. Nurses in all positions and to a degree in all settings are exposed to multiple technological advancements. These advancements are likely to continue and to expand further in all settings, particularly with the rise of telemedicine. For example, it has been recommended that nursing education build strong partnerships with health care agencies to better prepare graduates for the high technology demands of all health care delivery settings, including homes and other community-based settings (U. S. Department of

Health and Human Services, 1993). Although Knowledge of and Ability to Use Patient Care Technologies was not considered a core competency, based on the study criterion, it is certainly important and in the future likely to be rated even more important.

Recognition that the nurse does not control the patient setting. Less than 60% of respondents perceived this competency as very important. As nurses provide care in the places that patients play, work and live, they will increasingly find that the RN does not control the patient setting. Research in home health, in particular, has documented this “competency” as a needed attitude for effective practice (Kalnins, 1989 ; ANA, 1996). Interestingly, more nurses in long term care (65%) perceived this competency as very important than did nurses in community-based settings (63.2%). Only 56.4% of nurses in the acute care environment, where traditionally the nurse has controlled the patient setting, perceived the competency as very important.

The three competencies for which there were statistically significant differences are Knowledge of community resources; Ability to communicate with physicians; and Independence: the ability to function without readily available support. These competencies were consistently rated less important by nurses from acute care hospitals than by nurses in the other settings. Knowledge of Community Resources and Independence have been discussed. Ability to communicate with physicians was rated “very important” by a majority of respondents, representing all work settings. Nurses in community-based settings rated it significantly more important than did nurses in the acute care setting. The criterion required for a core competency was that there should be no significant differences across settings. Therefore, based on the study criterion, this was



not a core competency. The additional comments elicited from respondents expanding this competency to include communication with patients and all types of health team members, as well as recognition of the importance of verbal and non-verbal communication would justify classifying this competency as a core competency. If the tool was used again, it is recommended that the statement be revised to include the comments related to it or that additional competencies related to Interpersonal/Communication Skills be included.

Six “new” competencies were identified by the analysis of qualitative data from study participants in response to the statement, “Please indicate any competency (knowledge, skill or ability), that is essential for a new graduate to possess upon entry to practice in order to function across settings that is not listed...” Upon close examination and with consideration of the conceptual framework for this study, some of the “competencies” are more appropriately defined as “professional attitudes.” Others are activities or attributes. This emphasizes the need for a shared articulation of the definitions of competencies, core competencies, attributes, activities and professional attitudes.

### Conclusions

The significant and emerging changes in the financing, organization and delivery of health care services are affecting the education and practice of nurses, particularly entry-level nurses. Given the perceived gap between expected and observed competencies of new graduates and the need for registered nurses with knowledge, skills and abilities more appropriately matched with the patient needs, nursing has been

challenged to produce the right numbers and type of nurses, with the appropriate competencies. The first step in the process is determination of the competencies registered nurses should possess upon graduation in order to function across practice settings.

This descriptive study, that was both quantitative and qualitative in nature, sought to describe the required core competencies. Based on the input of nursing staff, nurse executives and nursing faculty in the Commonwealth of Virginia, five constructs representing 19 competencies were deemed essential for newly licensed registered nurses. The internal consistency reliability of the scales supported the inclusion of all competencies. In addition, respondents identified six competencies that should be considered as essential competencies. Not included in the listing of core competencies was the competency cluster Management and Care Coordination Skills. Included in this cluster are six sub-competencies, all of which were rated “important” by participants, and more highly rated by nurses practicing in community-based settings. Further research needs to be conducted to determine if these are skills that the new graduates need to have or for which employers in community-based settings are willing to assume responsibility for the development. The researcher operates on the premise that most nursing programs have only a limited period of time to educate nurses; therefore, a core set of competencies should be program outcomes and other competencies should be developed after hire, with experience in the job.

Nursing faculty, nurse executives and nursing staff differed somewhat in their perceptions of the importance of some competencies, primarily those associated with

Critical Thinking/Problem Solving and Psychosocial Skills Scales; however, overall, there was more consensus than differences. The practice of entry level registered nurses varies somewhat across practice settings; however, the core competencies identified in this study did not vary significantly across health care settings.

### Limitations

The instrument was a self report tool that in some instances required forced choices. Additionally, the competency statements were subject to interpretation. Given the complexity of entry to professional nursing and the unresolved issues associated with it, respondents may have wanted to respond to a particular program graduate, e.g. associate degree, instead of considering the competencies “a registered nurse” must possess upon entry to practice.

Although the sampling methodology used was effective in recruiting nurses from diverse work settings and positions, the generalizability of the study is limited to nurses in Virginia with similar demographic characteristics. Caution should be used when generalizing to nurses outside the state of Virginia.

No standard definition of a “core competency” was found; therefore, the researcher established the criteria for the purposes of this study. Interpretation of the findings should be made with consideration of this definition and its inherent limitations.

### Recommendations for Further Study and Research

“Core competency” was easily defined from a theoretical perspective: the knowledge, skills and abilities required of a registered nurse in order to function across settings upon entry to practice. When defined statistically, the process was untested and

at times produced findings difficult to interpret. One of the first steps in the process of reaching consensus among nursing staff, nurse executives and nursing faculty is to agree on and articulate a clear definition of “core competency.” Additionally, it is very important to differentiate competencies from tasks, activities, attitudes and attributes. For example, the conceptual framework developed by Stark, et al. (1986b) and modified by Stark and Lattuca (1997) differentiated educational program outcomes into professional competencies and professional attitudes. Another potential model is that used by the AACN (1998) in which the outcomes of baccalaureate programs were defined as core competencies, core knowledge and professional values. Then, nursing education and nursing service should explore various options, such as advisory committees, task forces, forums or workshops, to further clarify and achieve consensus regarding expected competencies of new graduates. Following this process, the competencies should be empirically confirmed to validate and/or complement the findings of this study.

The instrument should be modified by adding an “other” category for position and workplace. This would help to increase the accuracy of the self reported data. Two of the scales require further testing and validation. Given the additional competencies and clarification elicited from participants, the Interpersonal/Communication Skills and the Psychosocial Skills scales should be reviewed for completeness, revised as appropriate and retested. Additionally, the six “new” competencies recommended by participants should be added to the instrument prior to testing.

Future research should focus on determining the best route and method to prepare entry-level nurses with the expected competencies. Since most community-based health

care agencies specify a number of years of medical-surgical nursing experience as a requirement for hire, future research should focus on determining whether the findings of this study are those competencies an RN is expected to develop within the specified years of experience. Also, research could help community-based agencies differentiate between those competencies expected upon entry to practice and those that may be developed after hire through orientation programs and experience in the settings. Research that measures the frequency, as well as, the importance of the competencies may provide the appropriate data for decision making. Additionally, outcomes research studies should be conducted to determine if entry level nursing graduates are demonstrating the aforementioned desired program outcomes.

In this study the perceptions of nursing staff, nurse executives and nursing faculty were assessed. Future research should focus on the expected competencies of entry-level registered nurses, as perceived by physicians. With health care reform, particularly the advent and growth of managed care, the roles, responsibilities, and relationships of all health professionals are changing. Changes in the physicians' roles and responsibilities have potential effects on those of nurses. Effective interdisciplinary team work is dependent upon physician collaboration with nurses. Thus, the registered nurse, even new graduates, will be expected to demonstrate competencies appropriate to the changing roles and responsibilities.

#### Implications For Nursing Education and Practice

Given the market forces directed at providing health care in the most appropriate settings by the least costly skill mix of competent practitioners, the challenge to nursing is

to clearly articulate the expected competencies of entry level registered nurses. The multiple entry routes, without differentiation in practice, complicates the matter. Perhaps these research findings can aid the nursing community in making difficult decisions about the numbers and types of nursing programs used for the preparation of registered nurses, an unresolved issue referred to as the “entry-into-practice” issue.

This study has sought to determine program outcomes for which basic nursing education programs should strive. Given the dynamic nature of health care delivery, basing education on outcomes and competencies that transcend time and setting is the best approach for ensuring consistency between required and observed behaviors. The nursing community is expected to examine the competencies and determine the best method (type of basic nursing education program) required to produce graduates competent to function in the evolving health care delivery system. In a market driven health care delivery system, a difference must be demonstrated in the output (actual performance of graduates) of the various programs. The program that is able to produce graduates with the expected competencies, at the least cost to society is likely to be supported. Although the literature is replete with recommendations for the baccalaureate degree as the appropriate credential for the entry-level registered nurse, conclusive research linking education to program outcomes and expected roles have not been produced. Thus, further research is required to assess whether there are differences in observed behavior of graduates of associate degree, diploma and baccalaureate degree programs.

Faculty should engage in judicious curricular reform, with nursing staff and nurse executive participation on curriculum committees, to design programs to effect required educational outcomes. Particular emphasis should be placed on the development of assessment skills, critical thinking/problem solving ability and communication skills. Faculty development programs are recommended to assist faculty in considering a different philosophical approach to the preparation of nurses and to aid them in assuming the new roles and responsibilities associated with the rapidly changing health care environment. Incorporation of faculty practice in the standards for schools of nursing is a necessary strategy to enhance their ability to function in varied health care settings.

Nursing education and nursing service should collaborate in the design of orientation and transition programs for graduates. Increasingly, newly licensed nurses are reporting that they did not receive an orientation or that it was very limited (Yocum, 1997). Nurses from acute care should collaborate with nurses from long term care and community-based settings regarding orientation, transition programs and professional development strategies for the newly licensed registered nurse. Additionally, nurses from acute care and nursing faculty can assist in the design and development of preceptor development programs for long term and community-based settings. Preceptor development programs are needed to educate staff in these settings to participate in the education of new graduates.

Leaders from education and practice and policymakers can use these findings to discuss changes in the size and composition of the nursing workforce. In 20 states across the country nurses are participating in the “Colleagues in Caring” Project funded by the

Robert Wood Johnson Foundation. This program is designed to promote collaboration of all interested constituents— nurses, employers, and faculty from all practice settings and nursing programs— in the redesign of nursing education. Virginia is not one of the participating states. The findings of this study may stimulate greater collaboration among all interested parties. Additionally, the findings of this study may be useful to the nursing leadership in Virginia, particularly the Virginia Nurses' Association and the Board of Nursing, in their efforts to promote nursing workforce planning. A critical component of RN workforce planning is determination of the expected competencies of registered nurses (Cleary, Lacey, & Beck-Warden, 1998). The study's findings, the 19 core competencies and the additional six "new competencies elicited from respondents, could be used as baseline data for further assessment and validation of professional competencies and professional attitudes required of new graduates by employers in Virginia.



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## APPENDIXES

## Appendix A The Instrument

**REGISTERED NURSE COMPETENCIES****Part I--Competency Ratings:**

*In the evolving health care delivery system, new registered nurse graduates may have to work in hospitals or community-based settings immediately upon graduation. The following is a listing of competencies that may or may not be important for registered nurses to possess upon entry to practice. Please rate how important you think it is for new graduates to possess each competency by indicating whether, in your opinion, it is "essential," "very important," "important," "less important," or "unimportant." Please use a "black" or "blue" ink pen or a #2 pencil to blacken the circle corresponding to the descriptor that best represents your rating of the importance of each competency. For Items 26 & 27, please PRINT in your responses.*

	Essential	Very Important	Important	Less Important	Unimportant
<b>Interpersonal /Communication Skills</b>					
1. Ability to communicate with physicians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Ability to function as a member of an interdisciplinary team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Ability to build a continuing relationship with patients and their families.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Ability to teach and counsel patients and their families.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Ability to document interventions and outcomes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Critical Thinking/Problem Solving Decision Making Skills</b>					
6. Critical thinking: ability to problem solve and apply knowledge to diverse situations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Analytic skills: ability to gather and interpret data about patients, families and communities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Ability to apply ethical principles and professional standards in decision making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Management and Care Coordination Skills</b>					
9. Ability to complement physicians to maximize physicians' and nurses' productivity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Case management skills: the ability to intervene across the continuum of care; ability to consider and act upon the cost effects of decisions regarding care.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Ability to manage nurse assistants and unlicensed assistive personnel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Ability to coordinate other service providers, such as social workers, physical therapists, dieticians, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Knowledge of community resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Direct Care Skills/Technical Skills	Essential	Very Important	Important	Less Important	Unimportant
14. Sensitivity to the needs and situations of diverse patient groups, i.e., elderly, ethnic groups, children.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Experience with a wide range of patient conditions; Proficient clinical nursing knowledge and skills.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Knowledge and skills related to information management.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Knowledge of and ability to use various patient care technologies.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Ability to conduct physical assessments of patients.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Ability to conduct psychosocial assessments of patients, families and communities.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Technical skills, such as proficiency in handling IVs, venipuncture skills, medication administration, special treatments and procedures.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Self Management Skills

21. Initiative: self starting and self-motivated, as in setting own schedules.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Independence: the ability to work without readily available support.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Flexibility: the ability to adjust to unforeseen changes in patient's condition.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Recognition and acceptance that the nurse does not control the patient setting.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Ability to function autonomously in the absence of a physician.	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Please indicate any COMPETENCY (knowledge, skill or ability), that is ESSENTIAL for a new graduate to possess UPON ENTRY TO PRACTICE in order to function ACROSS SETTINGS that is NOT listed above. Please Print !! Thank You.*

26. Competency 1

27. Competency 2

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## Appendix A The Instrument

33. Does the organization for which you work hire new graduates for entry-level RN positions? ☐ Yes  
If yes, please answer question #34. If no, please go to question # 35. ☐ No
34. What is the minimum educational requirement for new graduates?
- ☐ No Minimum      ☐ Associate      ☐ Diploma      ☐ Baccalaureate Degree
35. Does the organization for which you work require experience for entry-level RN positions? ☐ Yes  
☐ No
36. If your answer to # 35 is "yes," how many years of nursing experience are required?
37. If experience is required, what type of experience is required?
- ☐ Hospital-based acute care  
☐ Community-based care, ie home health, community health,  
☐ Long term care, ie nursing home, extended care facility

***If you are a "Nurse Executive," Thank you for your time and cooperation in completing this survey. Please return the survey as soon as possible in the enclosed self-addressed, postage paid envelope.***

**Nurse Faculty, please complete questions 38 and 39.**

- 38. What are your primary teaching responsibilities?**

- ☐ Home Health
- ☐ Community Health
- ☐ Adult Health
- ☐ Public Health
- ☐ Mental Health
- ☐ Children's Health
- ☐ Women's Health
- ☐ Geriatric Health

**Other, please specify:**

[illegible]

39. Do you directly supervise clinical experiences for students in a basic nursing education program?
- ☐ Yes
- ☐ No

*Thank you for your time and cooperation in completing this survey. Please return the survey as soon as possible in the enclosed self-addressed, postage-paid envelope. Again, thank you.*

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## Appendix B

### Letter to Participants

Dear Nurse Colleague:

This letter is both an introduction and a request for your participation in a research study. I am a doctoral candidate in the School of Education of the College of William and Mary. Additionally, I am a registered nurse with a professional interest in the education and practice of nurses.

As you know, we are in the midst of a health care reform movement. Rising health care costs, introduction of new technologies, changing societal demographics and changes in reimbursement policies and practices are some of the forces creating a need for health care organizations to function more efficiently. Accordingly, the roles and responsibilities of health care providers, especially nurses, are being affected.

My doctoral dissertation topic is "Core Competencies for Registered Nurses Upon Entry to Practice." The purpose of the study is to identify the knowledge, skills, and abilities (core competencies) nursing graduates need upon entry to practice in order to function across diverse settings in an evolving health care delivery system. Nurses representing a broad spectrum of positions and from a variety of health care agencies and schools of nursing within the State of Virginia will be surveyed. It is anticipated that the survey findings will be used by nursing faculty for curricular design and revision. In addition, staff development educators and continuing education providers may also use the findings for design of orientation, continuing education and career development programs.

Your participation is highly valued and involves completing a two-part questionnaire. Part I of the questionnaire consists of 25 competency statements for which you are being asked to rate their relative importance. Part II requests demographic data that will be used to describe the sample. It is anticipated that it will take you 10 - 15 minutes to complete the questionnaire. The survey is numbered solely to allow follow-up. Your confidentiality will be fully protected. All data reported will be aggregated, so that individual participants and their responses will not be identifiable.

I sincerely hope that you are willing to participate in this study. If so, please take a few minutes to complete the attached questionnaire and return it in the enclosed self-addressed, stamped envelope by November 6, 1998. If you have any questions, please contact me via email at "Bmarshall @ aol.com."

Thank you.

Bennie L. Marshall, RN, Ed.S.



## Appendix C

## Reminder Card

**Registered Nurse Competencies Study**

November 16, 1998

Dear Colleague:

I recently sent you a survey, "Registered Nurse Competencies," designed to identify core competencies for registered nurses upon entry to practice in the evolving health care delivery system. Your input is highly valued. If you have not completed and returned the survey, please take 10 - 15 minutes to complete it. If you have already returned it, I appreciate your help.

Thank you for your participation,

*Bennie L. Marshall, RN, Ed.S.*

## Appendix D

## Follow-up Letter

January 7, 1999

*Dear Nurse Colleague:*

Recently I sent you a letter requesting your participation in my dissertation research study: ***Core Competencies for RNs Upon Entry to Practice***. I have not received a response from you. Now I am asking you to help me describe the non-respondents and explain why some people responded to the survey and some did not. The success of my study is dependent upon your response. Please take a few minutes to answer the following questions.

**I did not participate in the study because:**

- ☐ A. I chose not to participate.  
☐ B. I did not receive the letter and survey.  
☐ C. I misplaced or lost the survey.  
☐ D. I did not feel that I was the best (most appropriate) person to complete the survey because: \_\_\_\_\_  
☐ E. Other, please specify: \_\_\_\_\_

**How do you classify yourself?**

Nursing staff: \_\_\_\_\_  
 Nurse Executive: \_\_\_\_\_  
 Nursing Faculty: \_\_\_\_\_  
 Other, please specify: \_\_\_\_\_

**How many years of nursing experience do you have?** \_\_\_\_\_

**If employed, where do you currently work?** \_\_\_\_\_

**How many years have you been employed in your current workplace?**  
 \_\_\_\_\_

**What is your highest level of education?** \_\_\_\_\_

***Thanks very much for your help. Please return this questionnaire in the enclosed self-addressed, stamped envelope as soon as possible.***

Sincerely,

Bennie L. Marshall

## APPENDIX E

**Registered Nurse Competencies Listed by Respondents****Competency 1. CARING**

1. I think we've lost some of the basic skills of caring - nurse technology - not the patient.
2. Ability to provide a therapeutic environment.
3. Empathy
4. A holistic perspective.
5. Respect: to have a overall respect for the patient, the family. Also a respect for and willingness to follow unit/hospital rules, policies, procedures.
6. Ability to create a safe environment for the patient and family.
7. Ability to convey caring about the client as an individual to client and their families.
8. Knowledge and skills related to care of dying patients.
9. Patience.
10. Any nurse must be compassionate - realizing the importance to both the patient and family of any need for hospitalization no matter how routine it may be for the staff.
11. Recognition of the patient as a whole not just a specific problem.  
Example: not just an appendectomy.
12. Remain caring and considerate of all patients and treat each as if God himself is watching, TV cameras are rolling you are being witnessed by a court room filled with family members. Confidentiality, kindness, and competently skilled.
13. Ability to care for self physically emotionally and spiritually.
14. Emphasis on the "art" of nursing as well as the "science".
15. Have knowledge of death and dying care-- and care for seriously ill. Be sensitive to family needs. (as a patient, one is better able to discern good nursing care) basics very important!
16. Able to give good basic nursing care that includes back rubs and just taking time to be with patients giving comfort and support.
17. Try and be at bedside of patient and caring more. RNs are missed at the bedside.
18. The ability to be kind and compassionate to every pt.
19. Develop sensitivity in managing/leading subordinates i.e., technical support group.

## **Competency 2. CULTURAL COMPETENCE**

1. The ability to recognize each patient's physical, emotional, and spiritual needs.
2. The ability to apply these competencies in the care of multiple patients. The ability to treat patients with the same level of care regardless of age race or social economic background.
3. Valuing others, including clients and families who represent diversity to them.
4. Cultural competence is essential to practice in community-based settings.
5. The ability to treat each client holistically - mind, body and spirit.
6. To be culturally competent - respect and awareness of the differences and value systems inherent in every client.
7. Ability to work with a group of nurses with diverse backgrounds, skills and educational levels.
8. The ability to accept each individual just as he or she is.
9. Communication skills to deal with co-workers and patients of all cultural backgrounds and religions
10. Flexibility to work effectively with different ethnic groups.
11. Respectful - particularly with the aged who although, perhaps less than desirable as a patient, were in most cases responsible members of society and a person loved by others and important to them. They should be treated accordingly.

## **Competency 3. PRIORITY SETTING/ORGANIZATIONAL/TIME MANAGEMENT SKILLS**

1. Ability to prioritize.
2. The ability to consider the needs of multiple patients, and to prioritize tasks in relation to their urgency.
3. Be responsible in being on time -- use time wisely.
4. Organization of work day.
5. Organizational- ability to prioritize assignments and patient's needs.
6. Ability to organize and prioritize according to patient's individual needs.
7. Prioritization.
8. Ability to prioritize direct and indirect activities for the shift.
9. Prioritization and organizational skills.
10. Ability to manage competing priorities.
11. How to prioritize patients needs and plan care accordingly.
12. Ability to prioritize when (as will be the case more often than not) you don't have enough help.
13. Priority setting using the resources available when assigned to 5-6 patients.
14. Prioritizing nursing interventions/workload.

**Competency 3. contd.**

15. Ability to prioritize (which is not adjusting or being flexible) care based on 1) care needs or 2) unit needs.
16. Time management/ability to prioritize - knowledge of what to complete first based on needs of the patient(s). Direct participation in patient care.
17. Time management.
18. They must have organizational skills.
19. Organization.
20. Ability to respond to emergencies.
21. Structured in management of time... patient care, charting patient education.
22. Time management skills.
23. Ability to prioritize and manage time efficiently when caring for a diverse group of patients.
24. Ability to prioritize - what can wait and what can't.
25. Ability to organize and prioritize care to achieve maximum efficiency.
26. Time management skills are essential.
27. Ability to prioritize patient needs and work load to be effective.
28. Ability to be efficient; get work done rapidly.
29. Ability to remain calm in the above situation amid many simultaneous and conflicting demands.
30. Ability to utilize time constructively and in an organized manner to accomplish assigned responsibilities.
31. How to handle multiple tasks simultaneously and competently.
32. Multiple patient management (4 patients).
33. Decision making skills (prioritizing)
34. Ability to prioritize and organize patient care.
35. Ability to do 3 or 4 things at one time.
36. How to handle multiple tasks simultaneously and competently.

**Competency 4.        ADVOCACY SKILLS**

1. Act professional - no 1st names please! Develop skill of listening to patients, show compassion and kindness and sensitivity to patients feelings.
2. Ability to function as a team member and respect all coworkers.
3. Collaboration with other health care providers.
4. Operate with personal integrity.
5. New graduate should know how to work with others and be flexible.
6. Communication skills, patients, understanding, desire to be a part of a team is very important (one must be a team player).
7. Commitment to the profession.

**Competency 4. contd.**

8. Ability to function as a member of a professional practice group.
9. Sound work ethic - dependability.
10. Honesty and integrity in their practice.
11. Teamwork.
12. Ability to work using safe professional principles and standards and to safeguard, protocol and promote health care of individual/family.
13. Ability and willingness to assist CNAs with primary care.
14. Ability to remain calm in often loud chaotic situations involving physicians families, other staff, etc.
15. Acts professionally and projects a professional demeanor at all times.
16. Ability to hold back personal feelings and opinions of your patient in order to give optimal care.
17. Ability to conduct themselves professionally; to separate their own experience from that of the clients.
18. Team work-they need to understand they are part of a large team with the patient's needs and goals taking the lead.
19. The ability to introduce oneself to a patient with self confidence to let him/her know you are there to help, not to be "in charge of".
20. Nursing as profession not just a job.
21. Accountability and professionalism.
22. Triage and delegation.
23. Conduct reflects professionalism.
24. Function as a team player; take ownership for decisions, seek opportunities for professional growth.
25. Shared leadership.
26. Professional activity/organizational support -- need to be members of nurses organization.
27. Understanding of the demands and realities of nursing.
28. Teamwork with non-nursing members of the care team.
29. Ability what nursing is and the essential contributions nurses make to healthcare.
30. Political/social understanding of lobbying.
31. Ability to function within the legal frame work.
32. Awareness of public policy concerns - legislation affecting health care.
33. Maturity.
34. Accountability.
35. Accountability.
36. Accountability and professionalism.
37. Accountability.
38. Patient advocate.
39. Recognition of the nurse as a patient advocate with a duty to the patient.

**Competency 4. contd.**

40. Ability to assist patients/families in decision making re: care i.e., ethical considerations.
41. Patient advocate! Holistic assessment.
42. Ability to provide advocacy for patients with third party payers, inc. Medicare.
43. Able to advocate for patients, nurses, nursing.
44. Ability to be a good patient advocate.
45. Understanding that clients determine the quality of the outcome.
46. Ability to advocate for patients i.e., initiating contacts with physician for med changes.

**Competency 5. INTERPERSONAL/COMMUNICATION SKILLS**

1. Ability to communicate well with staff, patients, etc.
2. Writing clearly so handwriting can be read.
3. Interpersonally able to work with team.
4. Need to have command of the written language.
5. Ability to communicate professional values.
6. Effective verbal and written communication with all levels of healthcare providers.
7. Assertiveness.
8. Assertiveness-ability to speak up for themselves (and their patients/advocacy).
9. Must have basic conflict management skills.
10. Ability to defuse acute situations.
11. Grammar, composition, spelling > writing skills.
12. Communication skills with peers/preceptor in order to maximize orientation. Technically self management.
13. Conflict resolution in team practice.
14. Communication skills with peers.
15. Communicate intelligently and clearly to all areas of interaction - Dr - nurse - techs - and above in language understood and comprehended by patient and family.
16. Ability to communicate/negotiate with peers.
17. Ability to accept constructive criticism.
18. Customer service skills.
19. To communicate with co-workers (nursing staff) i.e., condition of patient, if you need help or are available to help.
20. Ability to assess "stress" in co-workers/physicians and coping skills to enable conflict resolution.
21. Communication and feed back skills (to all people not just physicians).

**Competency 5. contd.**

22. Verbal communication skills.
23. Non-verbal communication skills.
24. Tack and diplomacy skills.
25. Positive interpersonal skills and approach.
26. To be able to read physician's orders correcting and to not be timid in questioning the Dr. when unsure.
27. Ability to defuse potentially hostile situations, i.e. angry/hostile family.
28. Communication skills to deal with co-workers and patients of all cultural backgrounds and religions
29. Customer services/service recovery skills.
30. The ability to communicate effectively.
31. Writing skills.
32. Ability to communicate in a caring but professional manner with client and family.
33. Communication-ability to relate in a clear concise and professional manner to patient families, Drs and co-workers.
34. Under communication - ability to communicate to all clients, customers, patients.
35. Communication skills! Essential: being able to understand and clarify communication.
36. Basic leadership training; art of delegation, communication skills.
37. Ability to use group process as both leader and member.
38. Good writing skills!
39. Customer service training.
40. Ability to document care skillfully, succinctly.
41. Good listening skills.
42. Also a good listener.
43. Listening to patients, families and co-workers.
44. Observation/listening skills relative to conflict management, professional appearance and behaviors.

**Competency 6. REFLECTIVE PRACTICE/RESEARCH SKILLS/QUALITY IMPROVEMENT SKILLS**

1. Able to apply nursing theory and research to practice.
2. Ability to apply nursing theory in practice.
3. Beginning ability to apply research findings in clinical settings.
4. Ability to integrate pathol., disease, meds, treatments, nursing diagnosis and work nursing process.
5. Ability to interpret lab values and apply/understand its significance to the patient's condition.



**Competency 6. contd.**

6. Ongoing evaluation of interventions and outcomes.
7. Knowledge.
8. Ability to use scientific knowledge in practice.
9. Total quality improvement.
10. Participate in improving organization performance activities.
11. Knowledge of various settings of healthcare across the continuum e.g.- out patient acute care - post acute - elder care, ED, clinics, hospitals, home health, nursing homes, skilled nursing.
12. Ability to find relevant research to support care decisions and/or interventions.
13. Ability to refine patient care practices based upon findings of nursing research, and/or scientific advances.
14. Ability to interpret, evaluate and apply research findings for the purpose of providing high quality patient care.
15. Ability to utilize nursing sensitive outcome classification. Conduct evidence-based nursing care.
16. Evaluate outcomes.

**Competency 7. SELF ASSESSMENT/CONTINUED COMPETENCY**

1. Commitment to continuing education.
2. Knowledge and skills related to service learning.
3. engagement with patient and family and continued enthusiasm for learning are essential.
4. Self development. Recognition that nursing is evolving--need to continue competencies and education.
5. Responsibility to maintain knowledge base and stay abreast of new interventions.
6. Recognition of the need for continuing education.
7. Ability to use available resources to find out answers to clinical questions.
8. Ability to continuously learn.
9. Identification of personal learning needs.
10. Recognition that learning continues after graduation. Ability to identify reliable sources of information and seek answers to questions.
11. Ability to identify continuing learning needs and to plan and implement a plan to address these needs.
12. Receptive to need for continuing education.
13. Ability to understand/integrate related research to support evidence based practice.
14. Ability to identify self learning needs.

**Competency 7. contd.**

15. Know what you don't know and never stop learning our profession is changing constantly.
16. Recognition of importance in continuing professional development.
17. Desire and initiative for continuing education/life long learning.
18. Commitment to life long learning.
19. Acknowledgment and acceptance that profession requires lifelong continuing education.
20. Measuring the exact proficiency of the skills.
21. The ability to seek a mentor and to recognize and understand the importance of professional relationships and interactions related to professional growth.
22. Ability to recognize weaknesses and accept constructive criticism to improve knowledge, skills, and quality of patient care.
23. Ability to recognize when to call for help.
24. Ability to assess self knowledge in clinical setting, identify own needs for learning, assistance/i.e., to recognize one's own competency and limitation.
25. College professionalism--how to understand one's weaknesses and expertise. Able to address colleague, request support, offer support and address conflict concerns, personalities direct and professional.
26. Ability to accept limitation that observing, assessing and evaluating judiciously for final decision making.
27. Ability to know when to ask for help from other team members.
28. Ability to recognize they are entry level clinicians and know when they need help, simply put..know when they don't know and get help.
29. Ability to seek knowledge from proper sources. Know when help is needed.
30. The realizations he/she needs a mentor as entry into nursing.
31. Seek and accept feedback.
32. It would be essential for a new grad to know when to ask for help when in a situation she/he is not comfortable with.
33. Should posses insight into one's limitations.
34. I think the most important thing a new grad or a 30 year nurse needs to know is ask questions if you don't know. Work as part of the team.
35. Ability to reorganize strengths/weakness for performance improvement.
36. Ability to seek out resources in the event the unit is short handed.
37. Must have the ability to know when to ask for help-- lack of experience must be realized and accepted for just that.
38. The ability to recognize her/his own shortcomings or lack of knowledge in some areas and the knowledge of where and when to seek assistance from someone more experienced.

**Competency 7. contd.**

39. Ability to know her skills and competency and know when to seek and get help.
40. Willingness to ask questions when in doubt.
41. Humility--the knowledge that they are still learners--that they are just at the start of what they will need to know to be valued.
42. Patience, ability to follow orders. Good sense to ask what you don't know.
43. Humility ~ I see many new grads so cocky - they won't ask questions-- they see it as incompetence rather than acknowledging each unit will teach and help them adjust to new skills.
44. Ability to self-evaluate.
45. Professional role/development.
46. Self-educator - recognize the educational experience needed to function as a professional nurse and incorporate this into everyday work situation.
47. Ability to accept mentoring by others; to learn from others with greater skills/knowledge and to apply same.
48. Understanding confidentiality of patient information.
49. How or where to get the knowledge to perform a task not previously trained for.
50. Ability to recognize professional/personal limitations and seek assistance from peers/team to provide highest quality of care possible.
51. Confident, self motivated.
52. The ability to ask questions and say you don't understand or don't know.
53. The ability to utilize books, Dr and other resources to better understand procedures and/or other information not understood by nurse i.e., find answers to questions not known.
54. To be able to recognize ones limitations and to not be placed in situation which could jeopardize ones license.
55. Ability to recognize an unsafe situation and obtain help.
56. Realize that clinical experience has been very limited and not to hesitate to ask opinion and or assistance when making critical judgement and assessment.
57. Ability to evaluate self in relation to performance expectations and outcomes.
58. Must know own limitations or areas needed further education.
59. To know the skill needed to improve.
60. Know how to get help or back up in all situations/setting.
61. Knowledge of his/her resources (among the staff) in the work environment (charge nurse, nursing supervisor, peers).
62. Knowledge of weak areas of expertise and humility to seek assistance.
63. Ability to recognize self doubt, act on it by asking questions no matter how seemingly insignificant.

**Competency 7. contd.**

64. Ability to recognize own limitations and use support system as needed.
65. Self awareness - understanding ones strengths and weakness enough to know when to ask for help.
66. Ability to appropriately utilize resources available to find answers to patient problems/issues e.g., policy/procedure, drug references, etc.
67. Recognize limitations.
68. Need to know why they need to ask for help.
69. Know what you don't know and never stop learning our profession is changing constantly.
70. Ability to identify own areas of knowledge deficits.
71. Recognition of own strength and limitations.
72. To whom or where to go for questions or backup.
73. Effective self conservation and self care skills.
74. Knowledge of self related to values, cultural perspectives and therefore ability to know one's own boundaries.
75. Ability to assess lab values and what it means in a patients condition. Communication skills, patients, understanding, desire to be a part of a team is very important (one must be a team player).
76. Knowledge of who to call for help.
77. Ability to seek assistance and/or supervision.
78. A willingness to use references as needed (if you don't know it, look it up!)
79. The ability to ask questions if in doubt when caring for post - operative patients as well as implementing new procedures such as transfusing blood to assessing a new patient upon admission.
80. To practice in scope of ability only.
81. Willingness to seek clarification of an unclear order or one that he/she does not understand.
82. Ability to adapt to and learn new technology/procedures.
83. Knowledge and skills to monitor, recognize and intervene in rapidly changing physiological emergency situations -- patient safety, codes, etc.
84. Ability to document care skillfully and succinctly.
85. Knowledge of disease processes including "warning signs" of impending emergency and lab results panic valves.

**Competency 8.            CRITICAL THINKING/PROBLEM SOLVING/DECISION MAKING SKILLS**

1. Independent thinking - decision making.
2. Problem solving ability in conjunction with physical assessment.
3. Think on his/her feet.

**Competency 8. contd.**

4. Problem solving via critical thinking.
5. Ability to do operational and strategic planning.
6. Assessment of client medications, critical thinking.
7. Ability to critically process info.
8. Deal with ambiguity.
9. Ability to recognize a dangerous situation and ability to act on it quickly.
10. Ability to respond appropriately to emergency situations.
11. Ability to remain calm in often loud chaotic situations involving physicians families, other staff, etc.
12. Clinical judgement.
13. (My own personal concerns) Ability to take conflicting info from "reliable" sources and be able to maintain the ability to consider each but make decisions based on what is best for desired outcome for patients per D.O.
14. Anticipate - think ahead.
15. Follow up on your own with patients lab/test/procedures results and why patient needed them in the 1st place.
16. Ability to utilize data to make decisions.
17. Decision making skills (prioritizing).

**Competency 9. FLEXIBILITY**

1. Flexibility.
2. Support of equipment in a emergency/disaster situation. Independence: the ability to adjust/work without them.
3. Adaptable to the patient changing environment/and condition.

**Competency 10. PHYSICAL ASSESSMENT SKILLS**

1. Safe care, strong assessment skills.
2. Complete physical assessment skills.
3. Ability to interpret data i.e., labs, physical assessment, etc.
4. Physical assessment.
5. Assessment skills.
6. Technical skills/assessment skills.
7. Assessment and tech skills.
8. Head to toe physical assessment.
9. Mental health assessment and referral.
10. Assessment skills.

### **Competency 11.      MANAGEMENT AND CARE COORDINATION**

1.      Ability to manage care for a group of clients.
2.      Ability to devise a plan of care.
3.      Flexibility re: patient values. Value of taking medicine for pneumonia (antibiotic) vs value of not having diarrhea (a side effect) especially if person only has 1 bathroom or outdoor plumbing.
4.      Delegation skills.
5.      Ability to not only delegate and/or organize but be a team player yourself.
6.      Delegation of work.
7.      Delegation
8.      Knowing other service providers - ability to coordinate.
9.      Care/case management skills.
10.     Organization skills to care for a greater number of patients than experienced in school.
11.     To determine if continuity of care for patient being discharged is adequate.
12.     Ability to develop and deliver safe, effective nursing care in non-traditional settings.
13.     Ability to do operational and strategic planning.

### **Competency 12.      COMPUTER LITERACY**

1.      Basic computer skills.
2.      Computer access--medical info system.
3.      Skill in information technology.
4.      Basic computer entry skills (use of the computer to analyze data).
5.      Computer technology.
6.      Computer skills with windows.
7.      Computer skills.
8.      Technical skills covered in #20 too broad. It is essential that every new graduate be proficient in IV management, medication administration and basic wound care.

### **Competency 13.      KNOWLEDGE BASE**

1.      To understand the cost of care provided.
2.      Knowledge of the health care system payment types/mechanism.
3.      Understanding of reimbursement/health care environment - principles of cost-effective practice.
4.      Understanding of reimbursement environment.
5.      Financial and cost-effective skills (i.e. budgeting, variances, etc.)
6.      Knowledge medicare/Medicaid other insurance guide lines.
7.      Health policy related to health insurance.

**Competency 13. contd.**

8. How major insurance - medicare, medicaid, HMO's and managed care works and how to support patients in gaining access to care in the various plans.
9. Excellent pharmacology background.
10. Excellent understanding of pharmacology.
11. Knowledge of pharmacology.
12. Knowledge: Pharmacological implications for care.
13. Medication administration competency.
14. Pharmacology drug/drug interactions/where to find the information.
15. Pharmacology.
16. Understanding of basic pharmacology.
17. Strong core knowledge of pharmacology.
18. Thorough knowledge of appropriate pharmacological agents.
19. Behavioral methods designed to improve health; i.e., dietary changes, exercise.
20. Knowledge of other various departments, special procedures and endo. How procedures are preformed and preps.
21. Strong core knowledge of pathophysiology and related nursing interventions.
22. Knowledge of behavioral changes theories.
23. Knowledge of common every day health care issues - so often or at least when I graduated - I had much info on the unusual and not the routine.
24. Knowledge of basic epidemiology.
25. Formulating plan of care, good setting.
26. Knowledge and skills to monitor, recognize and intervene in rapidly changing physiological emergency situations ---patient safety, codes, etc.
27. Working familiarity with alternative health care modalities.
28. To understand the cost of care provided.
29. Knowledge of the health care system payment types/mechanism.
30. Understanding of reimbursement/health care environment - principles of cost-effective practice.
31. Understanding of reimbursement environment.
32. Financial and cost-effective skills (i.e. budgeting, variances, etc.)  
Knowledge of medicare/medicaid other insurance guidelines.
33. Health policy related to health insurance.
34. How major insurance - medicare, medicaid, HMO's and managed care works and how to support patients in gaining access to care in the various plans.
35. Excellent pharmacology background.
36. Excellent understanding of pharmacology.

**Competency 13. contd.**

37. Knowledge of pharmacology.
38. Knowledge: Pharmacological implications for care.
39. Medication administration competency.
40. Pharmacology drug/drug interactions/where to find the information.
41. Pharmacology.
42. Understanding of basic pharmacology.
43. Strong core knowledge of pharmacology.
44. Thorough knowledge of appropriate pharmacological agents.
45. Universal precautions/infection control.

**Competency 14: DIRECT CARE SKILLS/TECHNICAL SKILLS**

1. Catheterization straight and foleys; do EKGs.
2. ACLS certification.
3. Documentation.
4. Documentation that reflects patients condition, changes, interventions and results.
5. Ability to interpret EKGs.
6. Critical care course and ACLS certified.
7. Interpretation of vital signs <sup>R</sup>/<sub>T</sub> patient's condition.
8. How to appropriately function during a code. How to use defibrillator. Familiarity with code drugs.
9. Central lines.
10. Program planning and development - basic skills.
11. BCLS.
12. Phlebotomy.
13. Strong clinical skills.
14. Technical skills/assessment skills.
15. Clinical skills (critical care and community health).
16. All nurses should be able to read basic telemetry, all nurses should be ACLS certified.
17. Evaluation of cardiac rhythms and appropriate treatment.
18. Math skills.
19. CPR and emergency procedures.
20. How to do IVS, NG tubes, draw blood.
21. Ability to understand and interpret blood gases.



## Appendix F

**ADDITIONAL COMMENTS**

1. Critical thinking (vital but listed). Diploma or college degree 3-4 yr programs produce more confident than associate programs because of background and experience (band 2 yr. programs).
2. The new nurse needs more information in pharmacology she/he needs at least 2 semesters on drugs. They need 4 years of education and lots of information on physical assessment and pathology. The nurse must step up to the diagnostic role that his/her job requires but doesn't entitle them to. Good documentation skills are essential. Ability to regard, treat and respond to their patients wholeheartedly.
3. I recommend they work med-surg the first year. I graduated a diploma.
4. Coordination of care - patients are often scheduled for multiple tests off the nursing unit. Also, physicians tend to write orders for duplicate tests they don't notice that other physicians have ordered.
5. Time management: due to cut back in staffing and recent increases in documentation paper work, nurses are being forced to spend less time with their patients and families, but are still forced to take the blame when things don't go right.
6. Control of emotional stress!! The ability to let situations "roll off your back" and smile no matter how forced it might be. Prioritize your day. If you can't take care of all the needs, at least you did your best. If patients and families get angry because physical care was not given as they think it should be unfortunately this happens when you are forced to take on too many patients.
7. Realization that the healthcare facility/employee relationship is symbiotic (mutually beneficial), not a host/parasite relationship. Knowledge of the function of JCAHO, the 12 standards, and how the nursing profession is impacted by them. Possess a current BLS healthcare providers card.
8. As a former nurse manager who hired new grad into an ICU setting, I am comfortable with lack of familiarity with technical skills and complex equipment. The new grad must possess a solid physiological knowledge base, critical thinking skills, team management skills, communication skills and assessment skills.
9. Bedside manners and flexibility.
10. High level knowledge in the following areas--restraints, age groups and specific care, analysis, sedation, abuse syndromes and domestic violence. Communication skills related to hospital operation and staffing issues. Awareness that learning, testing and competency demonstration are continuous and ongoing.
11. Familiarity with accrediting agency standards.

## Appendix F contd.

**ADDITIONAL COMMENTS**

12. Knowledge of and ability to follow agency protocol.
13. Knowledge of change process and how to implement.
14. Sanitation and cleanliness as it applies both to patient care and to health care facilities.
15. Accountability – they are new, we old timers understand. They need to know what accountability means and that we were “new” at one time. We all make mistakes, especially at first, that doesn’t mean we aren’t good nurses. They should expect our support.  
Bennie -- The environment in which you work definitely dictates your skill requirement.
16. Good luck with your study-I am just finishing my dissertation so I can appreciate what you’re going through.
17. Good luck on your research!
18. I would love to receive an abstract of your findings:
19. I also work in the acute care setting as a “staff nurse” your form does not allow me to note this.
20. Good luck in your study. This subject deserves serious consideration!
21. Admissions coordinator and counselor and substitute for clinical instructor in mental health nursing. Also, help with basic skills in Skills I and with freshmen. Also, tutor when necessary.
22. I am a RN/J.D. employed as a risk management consultant for a professional liability insurance company.
23. Problem is this assumes all levels are equal. It is a big flaw in my responses - and a significant limitation of this study.
24. Good luck with your work! Please publish. I am very interested in what you find. It could be a good adjunct to setting up educational programs both in the nursing school and practice setting. Are you using Benner’s work on skill acquisition?  
I have found it very helpful in guiding new nurses into their practice.  
Thanks!
25. Make nursing a “true” profession by requiring one entry level only (4 yr. Degree and no less).

## Appendix G

## Panel of Experts Invitation

January 11, 1999

Dear:

Thanks for agreeing to review the attached listing of competencies identified by respondents to my research survey, "Core Competencies of RNs Upon Entry to Practice." I took the 400+ competencies and categorized them. I would sincerely appreciate your review and validation of the appropriateness of the categorization (Category title based upon comments written by research participants). For the purpose of this research, "competency" was defined as "knowledge, skills, or abilities required for practice as a registered nurse."

Please use the following process in your review:

1. Review the listed statement to determine if it is an example of the competency named. If it is, place a check beside it. If it is not, please draw a line through the statement. If the statement should be placed in a different category, please write the number of the category, using the number beside each category title, at the end of the statement.
2. Delete any category that you think is inadequately represented by comments and would be better listed as "additional comments by participants" or that you think is not an example of a "core competency that registered nurses should possess upon entry to practice."
3. You may also rename a category if you think there is a better "competency" (category title) reflected by the participants' comments.

Additionally, please complete and return the "Data Sheet for Content Review Panel Experts" to me. Thanks for your help. Please return the forms to me as soon as possible, but no later than January 25, 1999. You may contact me if you have any questions at 543-3857 (H), 668-3412(W), pager 456-8173 or via email at "Bmarshall@aol.com."

Again, thanks for your help in this very important part of my research.

Sincerely,

## Appendix H

**Panel of Experts**

Name: Darleen Anderson  
 Degree(s): BSN, MSN  
 Certification(s): CNA, ACLS, BCLS, ATLS  
 Position: Vice President/Site Administrator  
 Years of nursing experience: 25

Name: Susan Jones  
 Degree(s): BSN, MS, Ed.D  
 Certification(s): CCRN  
 Position: Assoc. Professor of Nursing  
 Years of nursing experience: 35

Name: Valeria Mitchell  
 Degree(s): MSN  
 Certification(s): CCRN  
 Position: Trauma Clinical Nurse Specialist  
 Years of nursing experience: 23

Name: Suzanne Rita  
 Degree(s): BSN, MSN  
 Certification(s): CEN  
 Position: Educator  
 Years of nursing experience: 22 years as RN

Name: Edna Snider  
 Degree(s): BSN  
 Certification(s): Medical-Surgical Nursing  
 Position: Staff Nurse  
 Years of nursing experience: 15

## Appendix I

## Letter to VONE

May 10, 1998

Virginia Organization of Nurse Executives  
Associate Administrator  
Virginia Beach General Hospital  
Virginia Beach, Virginia

Dear Board of Directors of VONE:

This letter is both an introduction and a request for your assistance and participation in a research study. I am a doctoral candidate in the College of William and Mary, School of Education. Additionally, I am a masters' prepared registered nurse with an interest in the impact of health care reform on the education and practice of nurses.

As you are fully aware, we are in the midst of a health care reform movement. Rising health care costs, introduction of new technologies, changing societal demographics and changes in reimbursement policies and practices are some of the forces creating an urgent need for health care organizations to function more efficiently. Accordingly, as the amount of care provided in acute care facilities is decreasing, health care is being provided increasingly in non-hospital community-based settings. These changes in the health care delivery system are necessitating changes in the roles and responsibilities of health care providers, especially nurses.

My doctoral dissertation topic is "Core Competencies for Registered Nurses Upon Entry to Practice." ***The purpose of the study is to identify the knowledge, skills, and abilities (core competencies) nursing graduates need upon entry to practice in order to function across settings in an evolving health care delivery system.*** I am building upon the study conducting for ANA (1996) "The Acute Care Nurse in Transition" and the study conducted by VHA ins 1992 and supported by VONE, "Survey on New RN competencies." Nurses (staff, managers and executives) from a variety of health care agencies within the State of Virginia-- acute care hospitals and non-hospital community-based sites-- will be surveyed. Also, nursing faculty who teach in associate degree, diploma, and baccalaureate nursing programs will be surveyed. It is anticipated that these survey results will be used by nursing faculty for curricula design and revision. In addition, staff development educators and continuing education providers may also use the findings for design of orientation and career development programs.

Your assistance and participation are critical to the success of my work. I am asking for your support. I would like to survey the membership of VONE as the primary group of nurse managers and executives. As such, I would like to have the membership mailing list or assistance with sending the survey directly to the membership. Participation by the VONE members will involve completion of a two-part questionnaire. Part I of the questionnaire consists of 25 competency statements for which one will be asked to rate their relative importance. Part II requests demographic data that will be used to describe the sample. It is anticipated that it will take 10 - 15 minutes to complete the questionnaire. VONE's input is highly valued. The confidentiality of individual participants will be protected since all data reported will be aggregated. Of course, VONE's support of this research will be acknowledged as it will be an important effort in bridging the gap between education and practice. Copies of the findings with recommendations for further study will be forwarded to you upon completion of the study.

If you have any questions you may contact me via email at \_\_\_\_\_ @ aol.com or via telephone at (XXX) XXX-XXXX. Your assistance is greatly appreciated. Thank you.

Sincerely,

Bennie L. Marshall, RN, Ed.S.

## Appendix J

## Board of Nursing Letter

June 26, 1998

Department of Health Professions  
Finance Division  
6606 West Broad Street  
Fourth Floor  
Richmond, VA 23230-1717

Dear Sir:

I, Bennie Marshall, a resident of the Commonwealth of Virginia and doctoral candidate, College of William and Mary, School of Education, am writing to request a computer job run of registered nurse licensees.

**Please send a 6250 BPI IBM data formatted tape of all In-State Current registered nurses, Customer name list, sorted alphabetically.**

Please identify the **EBCDIC** and, if known, whether the tape is **"SL" or "NL."**  
Please find enclosed a money order for **\$350.00** to cover the cost of the requested tape.  
Should you have any questions or need any additional information, you may contact me at 757-668-3412 (W) or by email at [BMarshall@aol.com](mailto:BMarshall@aol.com).

Thank you.

Bennie L. Marshall, EdS.

## Appendix K

## Pilot Study Data

## Importance of Skills to Practice In Hospitals and Community - based Settings

## Results of Survey

Total number respondents = 44

17 Hospital    2 Home Care    4 Nursing Home    1 Health Policy  
1 Outpatient Clinic    1 Doctor's Office    15 Academia  
1 Community Health    1 Clinic for Profit    1 Public Health

Questions:	Extremely	Very	Less
	Important	Important	Important
1. Independence: the ability to work without readily available support.	57%	39%	5%
2. Flexibility: the ability to adjust when things don't go as planned.	86%	15%	0%
3. Ability to act decisively when the physician isn't available.	71%	21%	0%
4. Recognition that the nurse doesn't control the patient's setting.	48%	38%	13%
5. Ability to teach and counsel patients and their families.	71%	29%	0%
6. Self-starting and self-motivated, as in setting one's own schedules.	51%	40%	8%
7. Ability to build rapport for a continuing relationship with patients and their families.	79%	22%	0%
8. Ability to conduct physical assessments of patient.	71%	27%	2%



## Appendix K

## Pilot Study Data

## Importance of Skills to Practice In Hospitals and Community - based Settings

## Results of Survey

Total number respondents = 44

<b>Questions:</b>	<b>Extremely Important</b>	<b>Very Important</b>	<b>Less Important</b>
9. Ability to coordinate other service provides, such as social workers.	33%	54%	12%
10. Knowledge of community resources.	36%	46%	20%
11. Experience with a wide range of patient conditions.	38%	46%	17%
12. Sensitivity to the special needs of the elderly.	52%	39%	7%
13. Case management skills: the ability to consider and act upon the costeffects of decisions regarding care.	40%	54%	7%
14. Ability to communicate with physicians.	64%	32%	2%
15. Analytic skills, as in being able to gather and interpret data about patient populations.	60%	37%	2%
16. Ability to conduct psycho-social assessments of patients.	64%	37%	0%
17. Ability to complement physicians so as to reduce the time doctors spend with patients.	15%	43%	4-%

## Pilot Study Data

## Importance of Skills to Practice In Hospitals and Community - based Settings

## Results of Survey

Total number respondents = 44

<b>Questions:</b>	<b>Extremely Important</b>	<b>Very Important</b>	<b>Less Important</b>
18. Technical skills such as proficiency in handling IVS, Special treatment.	21%	68%	12%
19. Ability to manage nurse assistants, and other assistive personnel.	33%	54%	12%

## Appendix K contd.

## Pilot Study Data

## EVALUATION SUMMARY

5-EXTREMELY IMPORTANT, 4-VERY IMPORTANT, 3-IMPORTANT  
2-LESS IMPORTANT, 1-UNIMPORTANT

Speaker: Bennie L. Marshall

DATE: March 27, 1998

Expected Knowledge, Skills and Abilities (Core Competencies)**SCORE**

1. Ability to communicate with physicians. 42
2. Ability to function as a member of a interdisciplinary team. 45
3. Ability to build rapport for a continuing relationship with patients and their families. 48
4. Ability to teach and counsel patients and their families. 50
5. Ability to document interventions and outcomes. 50

Critical Thinking/Problem Solving Decision Making**SCORE**

1. Critical thinking/problem solving ability. 48
2. Analytic skills, as in being able to gather and interpret data about patient populations (research skills; QI skills) 49
3. Ethical decision making. 44

Management and Care Coordination Skills**SCORE**

1. Ability to complement MDs to reduce time they spend with patients. 36
2. Case management skills: the ability to consider and act upon the cost effects of decisions regarding care; intervention across the continuum of care. 42
3. Ability to manage nurse assistants or unlicensed assistive personnel (Basic leadership & supervision skills). 41
4. Ability to coordinate other service providers, such as social workers (Coordinate care; Interdisciplinary teamwork) 42
5. Knowledge of community resources. 44

## Appendix K contd.

## Pilot Study Data

## EVALUATION SUMMARY

5-EXTREMELY IMPORTANT, 4-VERY IMPORTANT, 3-IMPORTANT  
2-LESS IMPORTANT, 1-UNIMPORTANT

Speaker: Bennie L. Marshall

DATE: March 27, 1998

**Direct Care Skills/Technical Skills****SCORE**

- |  |      |
|--|------|
| 1. Sensitivity to the special needs of the elderly.  | 4.86 |
| 2. Experience with a wide range of patient conditions (Proficient clinical nursing knowledge and skills.                                     | 4.4  |
| 3. Knowledge and skills related to information and patient care technologies.  | 4.91 |
| 4. Ability to conduct physical assessments of patients.  | 4.6  |
| 5. Ability to conduct psycho-social assessments of patients, families and communities.   | 4.6  |
| 6. Technical skills, such as proficiency in handling IVs; venipuncture skills, Medication administration; special treatments and procedures. | 4.2  |

**Self Management Skills (Ability to work in unstructured settings and with minimal support)****SCORE**

- |   |     |
|---|-----|
| 1. Self-starting and self-motivated, as in setting their own schedules (Initiative) | 4.6 |
| 2. Independence: the ability to work without readily available support.             | 4.2 |
| 3. Flexibility: the ability to adjust when things don't go as planned.              | 4.5 |
| 4. Recognize that nurse doesn't control patient setting.                            | 4.5 |
| 5. Ability to act decisively when the physician isn't available.                    | 4.6 |

**Demographic Data****Current positions of applicants:**

Faculty 5      Staff 5      Nurse Executive 1

**Employment Site**

Home Care 6	School of Nursing 2
Community Health 1	Hospital 1
School Nurse 1	Church 1      Clinic 1

**Appendix L**  
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## Copyright Permission for Modification of Instrument

Subj: re: permission to modify instrument(s) used in ANA study-Reply  
Date: 98-04-03 09:43:51 EST  
From: COPYRIGHT@ana.org (COPYRIGHT)  
To: BMarshall@aol.com

I have spoken with Ed Bronder (202/651-7124) who has decided to allow you to use and modify the Quantitative Nurses Study/Hospital Screening Questionnaire that was used in the study for the publication, The Acute Care Nurse in Transition.

There are two conditions, however:

- 1) Please credit ANA for the tool and
- 2) Please send us a copy of your dissertation when it is completed.

The fee has been waived since you are using the material for educational purposes.

If you have any questions, please give me a call (202/651-7194) or send an e-mail (bross@ana.org).

Thank you.

Barbara Ross, Publications Specialist  
American Nurses Publishing/American Nurses Association

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**TO:** Bennie L. Marshall  
**FROM:** Ava Stinnett, Journals Manager  
E-mail: [stinnett.1@osu.edu](mailto:stinnett.1@osu.edu)  
**DATE:** April 7, 1998  
**RE:** *The Journal of Higher Education*

**Number of pages (including cover):** 1

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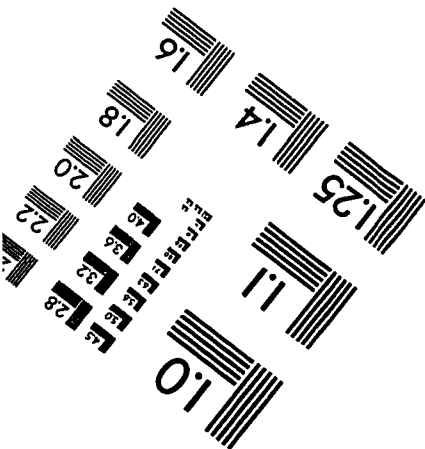
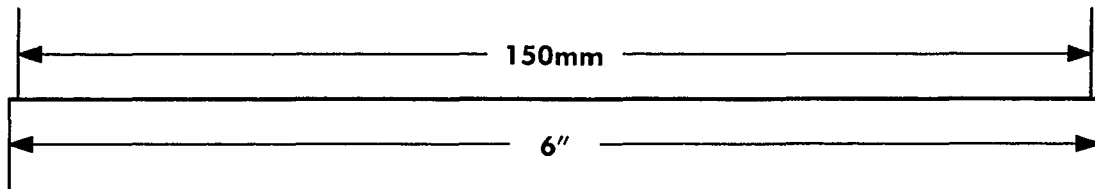
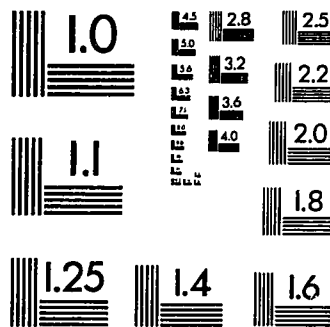
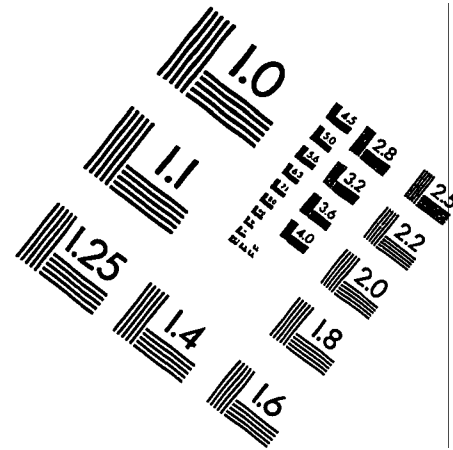
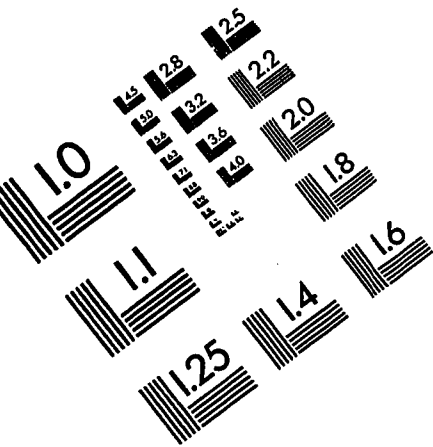
**Vita****Bennie L. Davis Marshall****Birthdate:**     **March 6, 1948****Birthplace:**   **Norfolk, Virginia****Education:**

1991-1995     **The College of William and Mary  
Williamsburg, Virginia  
Educational Specialist**

1978-1982     **Hampton University  
Hampton, Virginia  
Master of Science**

1966-1970     **Medical College of Virginia  
Virginia Commonwealth University  
Richmond, Virginia  
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